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Christina Meyers

FROM ESSENCE TO EXCELLENCE

A strengths-based approach to talent management

FROM ESSENCE TO EXCELLENCE

A STRENGTHS-BASED APPROACH TO TALENT MANAGEMENT

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From Essence to Excellence:

A Strengths-based Approach to Talent Management

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aan Tilburg University

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TABLE OF CONTENTS

CHAPTER 1

INTRODUCTION

A BRIEF INTRODUCTION TO TALENT BASED ON CLASSIC LITERATURE

"*Reason, and not feeling, is my guide; my ambition is unlimited: my desire to rise higher, to do more than others, insatiable. I honour endurance, perseverance, industry,* ***talent****; because these are the* ***means by which men achieve great ends and mount to lofty eminence****."*

(Charlotte Brontë – Jane Eyre)

"*Aunt Polly asked him questions that were full of guile, and very deep—for she wanted to trap him into damaging revealments. Like many other simple-hearted souls, it was her pet vanity to believe she was endowed with a* ***talent for dark and mysterious diplomacy****, and she loved to contemplate her most transparent devices as marvels of low cunning*."

(Mark Twain – The Adventures of Tom Sawyer)

"*Vronsky, Anna, and Golenishtchev, on their way home, were particularly lively and cheerful. They talked of Mihailov and his pictures. The word* **talent,** *by which they meant* ***an inborn, almost physical, aptitude apart from brain and heart****, and in which they tried to find an* ***expression for all the artist had gained from life****, recurred particularly often in their talk, as though it were necessary for them* ***to sum up what they had no conception of****, though they wanted to talk of it.*"

(Leo Tolstoy – Anna Karenina)

"*I certainly have not* ***the talent*** *which some people possess," said Darcy, "of* ***conversing easily with those I have never seen before****. I cannot* ***catch their tone of conversation****, or* ***appear interested in their concerns****, as I often see done*."

(Jane Austen - Pride and Prejudice)

"*The King of the Bulgarians passed at this moment and* ***ascertained the nature of the crime****. As he had great* ***talent****, he* ***understood*** *from all that he* ***learnt*** *of Candide that he was a young metaphysician, extremely ignorant of the things of this world, and he accorded him his pardon with a clemency which will bring him praise in all the journals, and throughout all ages*."

(Voltaire – Candide)

"Indeed?" said Monte Cristo; "so this gentleman is an Academician?"

"Within the last week he has been made one of the learned assembly."

*"And what is his **special talent**?"*

*"His **talent**? I believe he **thrusts pins through the heads of rabbits, he makes fowls eat madder, and punches the spinal marrow out of dogs with whalebone**."*

"And he is made a member of the Academy of Sciences for this?"

"No; of the French Academy."

"But what has the French Academy to do with all this?"

"I was going to tell you. It seems"—

"That his experiments have very considerably advanced the cause of science, doubtless?"

"No; that his style of writing is very good."

"This must be very flattering to the feelings of the rabbits into whose heads he has thrust pins, to the fowls whose bones he has dyed red, and to the dogs whose spinal marrow he has punched out?"

(Alexandre Dumas – The Count of Monte Cristo)

It sometimes appears as if the authors of classic literature have examined the term 'talent' through a kaleidoscope. As if, when passing on the kaleidoscope from one author to the next, the little mirrors and colored pieces of glass on the inside shifted and fell into a different shape, leading to a fundamentally different view of talent. What is talent then? One of the *means by which men achieve great ends,* next to industry and perseverance (Brontë)? Is it related to *dark and mysterious diplomacy* (Twain)? *An inborn, almost physical, aptitude apart from the brain and heart* (Tolstoy)? Is the ability to *converse easily with those you have never seen before* (Austen) a talent? Or the ability to *ascertain the nature of a crime*, to *understand*, to *learn*, and to form judgments based on the evidence (Voltaire)? Or is talent related to *thrusting pins through the heads of rabbits* (Dumas)? Is talent all or none of the above?

Personally, I find the question "What is talent?" extremely intriguing and I turned to scientific literature to answer it. Studying scientific literature, however, did not help me much in coming to a clear understanding of what talent was. Scholarly definitions of talent range from "the outstanding mastery of systematically developed competencies (knowledge and skills) in at least one field of human activity" (Gagné, 2010, p. 82) to "a person's recurring patterns of thought, feelings, or behavior that can be productively applied" (Buckingham & Vosburgh, 2001, p. 21), to "essentially a euphemism for 'people'" (Lewis & Heckman, 2006, p. 141), to "a potential that needs to be cultivated to bear fruit" (Csikszentmihalyi, 1998, p. 411). It thus seems as if the classical authors have passed on the talent kaleidoscope to the authors of scientific papers (Dries, 2013; Howe, Davidson, & Sloboda, 1998; Nijs, Gallardo-Gallardo, Dries, & Sels, 2014; Tansley, 2011). In the end, maybe talent might best be described as a term *to sum up what we have no conception of* (Tolstoy).

There is one aspect of talent, however, upon which both authors of classic and scientific literature agree, an aspect that underlines that studying talent is meaningful: Talent is mostly seen as a valuable construct because it can lead to outstanding performance. Eventually, it can help individuals *mount to lofty eminence* (Dumas), can *bring* them *praise in all the journals, and throughout all ages* (Voltaire), and *explains all that we have gained from life* (Tolstoy). Or, to phrase it in the words of scientists, talent is related to "the likelihood of becoming exceptionally competent in certain fields" (Howe et al., 1998, p. 399). And not only is talent beneficial for the individuals who possess it, but also for organizations that employ talented individuals: It has, for instance, been argued that "talent is needed to achieve organizational excellence" (Gallardo-Gallardo, Dries, & González-Cruz, 2013, p. 290).

This dissertation, in its broadest sense, is about the value of individual talents in the work context: It seeks to answer the question of how both employees and organizations can capitalize on or benefit from individual talents at work.

SCIENTIFIC INTRODUCTION

When asking human resource (HR) managers to list their top work priorities for the upcoming years, one common theme emerges: the management of talented employees (Deloitte, 2014; TowersWatson, 2014). Managing talented employees is considered necessary because these employees can potentially make an enormous difference to organizational performance, eventually helping their employers to gain a sustainable competitive advantage over other companies (Collings & Mellahi, 2009; Lewis & Heckman, 2006). In fact, it has been argued that talent management is "a strategic imperative" (Ashton & Morton, 2005, p. 28) for organizations because it can represent "the key to organizational efficiency" (Gelens, Hofmans, Dries, & Pepermans, 2014, p. 159).

Notwithstanding the agreement on the valuable nature of employee talent and on the resultant necessity of organizational talent management, there is little agreement on the exact nature of talent management, or on how talent management should be designed and implemented. Similar to the myriad of definitions that can be found for *talent*, *talent management* has been interpreted and defined in numerous ways (Dries, 2013; Lewis & Heckman, 2006). This can partly be explained by the fact that the question of how you manage something depends on the question of what you manage. Thus, the nature of talent management depends on the choice with regard to the definition of talent (Gallardo-Gallardo et al., 2013). Within this dissertation, I therefore explore different definitions of talent in the work context, and examine how the way in which talent is defined affects the way in which talent management is implemented in practice.

One of the defining features of talent on which HR managers and other organizational decision makers disagree is its (un-)commonness. Is talent extremely scarce or extremely common? Are we all talented (in one way or another) or just a few of us? Today's organizations seem to favor exclusive definitions of talent, that is, definitions that stress the scarceness of talent (Stahl et al., 2012). In many organizations, only a small percentage of all employees are considered talented (Huselid, Beatty, & Becker, 2005), and these employees are then referred to as A-players, top performers, high potentials, high achievers, or star employees (Michaels, Handfield-Jones, & Axelrod, 2001). Following this exclusive definition, talent management aims to identify, attract, develop, and retain the few employees who are considered talented (Silzer & Dowell, 2010), and thus often implies that these employees receive a more favorable treatment and get more opportunities than the great majority of employees who are not considered talented. The reasoning behind this approach to talent management is that organizations can greatly increase their profits by investing selectively in employees who promise to yield high returns on investment (Becker, Huselid, & Beatty, 2009; Boudreau & Ramstad, 2005).

Contrary to organizations with an exclusive approach to talent management, there is a small, albeit slowly increasing number of organizations in which all employees are appreciated for

the talents they possess (Stahl et al., 2012). This inclusive approach to talent management draws on positive psychology defined as the "science of positive subjective experience, positive individual traits, and positive institutions" (Seligman & Csikszentmihalyi, 2000, p. 5). Positive psychologists promote the idea that every single person has valuable talents or strengths (Buckingham, 2011), and that these strengths become manifest in activities individuals do well and with pleasure (Quinlan, Swain, & Vella-Brodrick, 2012). Strengths are not necessarily apparent or eye-catching—like the ability to draw or sing—but can encompass very small, or seemingly negligible things such as the ability to form impartial judgments or the ability to always see the bright side of things (Peterson & Seligman, 2004). Building on these ideas, inclusive talent management is directed at identifying the strengths of all employees and at placing employees in positions where they can develop and use their strengths in an optimal way (Swailes, Downs, & Orr, 2014). Note that—due to the proximity to research on positive psychology and individual strengths (Peterson & Seligman, 2004)—we use the term inclusive talent management interchangeably with the term strengths-based talent management. The potential benefits of inclusive talent management are emphasized by the theoretical assumptions that employees are happier when they can use their strengths, and that they learn quickly and eagerly if they get the opportunity to work on their strengths (Peterson & Seligman, 2004; Quinlan et al., 2012). Presumably, both increases in well-being and employee development might lead to increases in employee performance (Cropanzano & Wright, 2001) so that the inclusive approach to talent management can benefit individuals as well as organizations.

Despite these supposed, positive effects of the inclusive approach to talent management, it is still the exception rather than the rule in organizational practice (Gelens, Dries, Hofmans, & Pepermans, 2013; Iles, Chuai, & Preece, 2010). This might be explained by the fact that the knowledge base on effects of positive psychology in the organizational- or work context is still rather limited (Bakker & Schaufeli, 2008; Gable & Haidt, 2005; Swailes et al., 2014). It can, however, be asserted that practitioners are increasingly interested in more inclusive, positive approaches to managing employees, and started to look favorably upon the idea that all employees should be appreciated for the talents they possess. Nonetheless, HR managers and other practitioners might hesitate to promote changes in the existing (mainly exclusive) organizational practices, as long as there is no evidence that an inclusive approach has benefits above and beyond the exclusive approach. The idea that an organization's performance can be increased by investing disproportionally into employees who already perform well or who occupy strategically important positions seems to be inherently more appealing to organizational decision makers than the idea that an organization's performance will benefit from investing equally into all employees. Given the supposed benefits of inclusive talent management, but the lack of research to explore these benefits, my dissertation focuses on the following research question:

Towards an integration of positive psychology and talent management:

Is the strengths-based approach a beneficial, new approach to talent management in that it influences employee well-being and development, and if so, through what mechanisms does it work?

This overall research question can be subdivided into five more detailed research questions, which will be discussed in the following.

1. *What is talent and what is talent management?*
2. *How do organizational definitions of talent influence the nature of the organization's talent-management approach?*
3. *Can principles of positive psychology be applied to the work context and, if so, what effects does this have on employees and organizations?*
4. *What effects do strengths-based approaches have on employee well-being, and through which mechanisms do strengths-based approaches work?*
5. *What effects do strengths-based approaches have on the development of job starters, and through which mechanisms do strengths-based approaches work?*

What is Talent and what is Talent Management? (Research Question 1)

Talent management as a scientific field has been severely criticized for its lack of rigorous definitions, theoretical frameworks, and theory-based research propositions (Collings & Mellahi, 2009; Iles, Preece, & Chuai, 2010; Lewis & Heckman, 2006). The critique went so far as to argue that talent management might just be a momentary management fashion without any real substance to it (Iles, Preece, et al., 2010), or just a new, substitute label for HRM (Chuai, Preece, & Iles, 2008). In response to this criticism, scholars have started to develop definitions of talent management in recent years. Silzer and Dowell (2010), for instance, defined talent management as "an integrated set of processes, programs, and cultural norms in an organization designed and implemented to attract, develop, deploy, and retain talent to achieve strategic objectives and meet future business needs" (p. 18). While this definition specifies the components that talent management might encompass, it cannot tell us much about how talent management would be designed or look like in practice because the definition hinges on the word 'talent'. Depending on who or what is considered a talent, organizations might end up with fundamentally different talent-management systems even though all of these systems would be conform to Silzer and Dowell's definition (Gallardo-Gallardo et al., 2013). Scholars have pointed out that organizations tend to have very divergent ideas about talent and have marked ambiguities regarding the questions (1) whether talent is seen as something rare that only few employees possess (exclusive

understanding of talent) or something all employees have (inclusive understanding of talent), (2) whether talent can or cannot be developed, (3) whether talent is a person or a characteristic of a person, and (4) whether talent is characterized by high performance or high potential (Dries, 2013; Gallardo-Gallardo et al., 2013; Tansley, 2011). Given these ambiguities about the definitions of talent and talent management as well as the criticism this provoked, this dissertation aims at clarifying the theoretical understanding of the constructs talent and talent management.

How do Organizational Definitions of Talent Influence the Nature of the Organization's Talent-Management Approach? (Research Question 2)

Literature in the field of strategic human resource management (SHRM) has emphasized the necessity to consider the fundamental assumptions and ideas about the nature of human resources held by organizational decision makers when trying to explain the effectiveness of HRM. These fundamental assumptions and ideas about working people—or HR philosophies (Schuler, 1992)—determine how organizational decision makers design and shape HR practices or systems (Becker & Gerhart, 1996; Paauwe, 2004), and the specific design or shape of HR practices, in turn, predicts how effective they are (Boxall, 2013; Boxall & Macky, 2009). HR philosophies and the specific design of an HR practice are able to affect HR effectiveness because they influence how employees perceive, interpret, and react to the HR practices an organization provides (Nishii, Lepak, & Schneider, 2008). So rather than focusing on whether a certain HR practice is present in an organization or not, one has to focus on how a present HR practice is designed, and why it is designed that way.

This reasoning cannot only be applied to SHRM, but also to talent management: The fundamental assumptions about the nature of talent (talent philosophies) that organizational decision makers hold possibly determine the precise design of the talent-management practices, which, in turn, determine the outcomes of talent management. For instance, an HR manager who strongly believes that talent can be developed will design a talent-management system that provides employees with numerous opportunities to grow, whereas an HR manager who believes that talent is innate will design a talent-management system in which employees receive only limited training, and in which the existing training is mainly focused on acquiring expert knowledge or skills. While I do not doubt that the understanding of talent influences the design of talent management in practice, I do not know of any studies that offer theory on (or empirical evidence of) how a certain talent definition predicts the nature of talent management. Consequently, this dissertation aims at closing this gap in theory and research.

Can Principles of Positive Psychology be Applied to the Work Context and, if so, what Effects does this have on Employees and Organizations? (Research Question 3)

Talent management typically aims at increasing organizational productivity through investing in people (Boudreau & Ramstad, 2005; Collings & Mellahi, 2009; Vaiman, Scullion, & Collings, 2012). The strong emphasis on productivity gains puts talented employees in companies with exclusive talent-management approaches under considerable pressure to deliver excellent results because they have to live up to their elite status and justify the investments made in them (Dries & Pepermans, 2008; Garrow & Hirsh, 2008). While striving for continuous increases in productivity, organizations might thus run the risk of neglecting the health and well-being of their (talented) employees. The extent of current health threats due to work was highlighted by findings of the European Labor Force Survey (Eurostat, 2009) indicating that 8.6 percent of the EU labor force experience work-related health problems equaling about 20 million people. In addition, 40 percent of workers are exposed to conditions that might harm their physical health, and 27 percent are exposed to work conditions that could harm their (mental) well-being (Eurostat, 2009). Scholars in the field of HRM and organizational behavior therefore argue that organizations can only expect high productivity of employees if they take measures to protect their employees' health and well-being (Paauwe, 2009; Thunnissen, Boselie, & Fruytier, 2013b; Van De Voorde, Paauwe, & Van Veldhoven, 2012). Insights from positive psychology might help to achieve this dual goal of high employee performance combined with high well-being (Bakker & Schaufeli, 2008; Fredrickson, 2003; Peterson & Park, 2006) because positive psychologists strive to facilitate individual flourishing. Flourishing, in turn, is a state which is characterized by both high well-being (experiencing positive emotions and being engaged) and high productivity (feelings of meaning and accomplishment; Keyes & Simoes, 2012; Seligman, 2012).

In fact, it has been argued that combining positive psychology- and talent management research might result in a more inclusive, more socially responsible approach to talent management, in which fostering and protecting employee well-being is the primary motivation (Swailes et al., 2014). To my knowledge, however, these two research streams have not been systematically combined in the scientific literature yet. There are, however, more and more studies in which principles of positive psychology are applied to the context of work (Mills, Fleck, & Kozikowski, 2013), and insights from these studies can help us draw inferences about the potential added value of inclusive talent management. To draw these inferences, a review or meta-analysis that summarizes, structures, and evaluates the findings of research on positive psychology at work would be helpful, but such comprehensive reviews are still lacking to date (Mills et al., 2013).

What Effects do Strengths-based Approaches have on Employee Well-being, and through which Mechanisms do Strengths-based Approaches Work? (Research Question 4)

While there is neither an encompassing theoretical underpinning of, nor extensive research on inclusive talent management (Swailes et al., 2014), the scientific literature on (employee) strengths can teach us a great deal about the potential effects of inclusive talent management. Theory on strengths, for instance, underlines that employing strengths has a whole range of positive outcomes for individuals: Using strengths makes people feel good about themselves (Peterson & Seligman, 2004), it energizes and invigorates them (Peterson & Seligman, 2004; Tjepkema & Verheijen, 2009), and it motivates them intrinsically (Linley, Nielsen, Wood, Gillett, & Biswas-Diener, 2010). Moreover, using strengths is said to be positively related to high performance (Buckingham & Clifton, 2001; Linley & Harrington, 2006). Research evidence has supported some of the beneficial effects of using strengths for individual well-being, self-efficacy, self-esteem, and vitality (Govindji & Linley, 2007; Proctor, Maltby, & Linley, 2011; Wood, Linley, Maltby, Kashdan, & Hurling, 2011). In addition, studies on strengths interventions—short training interventions that focus on identifying strengths and encouraging people to develop and use their strengths—have shown that these interventions have consistent, small to moderate, positive effects on the well-being of children, adolescents, and adults (Quinlan et al., 2012).

However, there are only few studies on the effects of using strengths that have made use of adult samples, and even fewer studies that have explicitly focused on working people. Exceptions are, for example, studies by Harzer and Ruch (2012, 2013) who found that applying strengths at work is related to positive experiences at work and to interpreting the job as a true calling; a study by Littman-Ovadia & Steger (2010) who found that developing strengths at work is related to job satisfaction, experiencing meaning, and well-being; and a study by van Woerkom and Meyers (2014), who found that employees who feel supported in developing and using their strengths at work experience more positive emotions and perform better than other employees. Building on the promising findings of these cross-sectional studies, research that makes use of longitudinal and/or (quasi-) experimental designs to investigate effects of employing strengths at work on employee well-being is called for. In doing so, particular attention should be paid to possible mediating variables which transmit the effects of using strengths to other outcome variables, as well as to potential moderators or boundary conditions which facilitate or hinder the beneficial effects of strengths employment (Lyubomirsky & Layous, 2013; Quinlan et al., 2012).

What Effects do Strengths-based Approaches have on the Development of Job Starters, and through which Mechanisms do Strengths-based Approaches Work? (Research Question 5)

Talent management is often directed at young employees or job starters within an organization and involves substantial investments in the development of this group of employees (Cohn, Khurana, & Reeves, 2005; Dries & Pepermans, 2008; Spreitzer, McCall, & Mahoney, 1997). Due to an increasingly dynamic business environment, however, organizations face difficulties to predict what kind of skills employees will need to be successful in the years ahead (Spreitzer et al., 1997), implying that current talent-development initiatives might prove to be of little use in the future. Given this unpredictability, scholars have called for investing very broadly into the skills of all employees as a less risky alternative to exclusive talent-development strategies focusing on particular employees or particular skills only (Yost & Chang, 2009). Moreover, a dynamic business context requires that employees are eager to engage in continuous learning and are motivated to keep developing themselves (Barrie, 2004; Boutin, Chinien, Moratis, & Baalen, 2009; Vansteenkiste, Verbruggen, & Sels, 2013). Investing in the strengths of all employees might therefore be highly beneficial because theory links developing and using strengths to quick learning progress and to intrinsic motivation (Peterson & Seligman, 2004).

To the best of my knowledge, there are no empirical studies yet in which the theoretical assumptions about the link between strengths and personal development or learning have been investigated. Prior research has mainly focused on the relationship between strengths and well-being of young adults, and has, for instance, shown that strengths interventions can increase happiness and satisfaction with life of this target group (Rust, Diessner, & Reade, 2009; Senf & Liau, 2013). Some inferences about the link between strengths and learning can be drawn based on a study on a strengths development intervention for high school students (Austin, 2006). Results of this study revealed that participating in the intervention led to more positive academic behavior of high school students, including higher attendance rates, more in-class participation, and higher ratings of academic efficacy (Austin, 2006). Yet, to draw inferences about the effects of inclusive talent management on the development of young employees, studies with samples of young professionals or university students are called for. Ideally, these studies would not only include dependent variables that are related to development, but also possible mediating variables that transmit the effects of strengths interventions (Quinlan et al., 2012).

DISSERTATION OUTLINE

The research questions will be addressed within three conceptual and three empirical chapters (for an overview, please see Table 1). These chapters are structured as follows:

In **Chapter 2**, I review literature from different disciplines (most notably positive psychology, educational psychology, and HRM) in order to address the question: 'What is talent?'. A particular emphasis is placed on the question whether talent is stable and innate (nature), whether it can be developed (nurture), or whether talent results from an interaction of nature and nurture. I propose that definitions of talent can be mapped on a continuum ranging from completely innate to completely acquired, and I discuss implications of a definition's position on the continuum for talent-management practice.

Building forth on insights from Chapter 2, **Chapter 3** provides the reader with a more elaborate, two-dimensional framework of talent definitions that reflects not only the nature-nurture distinction but also the distinction between inclusive and exclusive talent definitions. Based on this framework, I discern four different talent philosophies (fundamental ideas about talent), and describe their differential effects on talent management in practice. The chapter offers testable propositions about the effects of the four talent philosophies on talent-management practices, and on individual- and organizational-level outcomes.

Table 1
Overview of Dissertation Chapters, Types of Research, and Research Questions

Chapter	Title	Research Type	Research Question
2	Talent — Innate or acquired? Theoretical considerations and their implications for talent management	Literature review Theoretical paper	1, 2
3	The influence of underlying philosophies on talent management: Theory, implications for practice, and research agenda	Theoretical paper	1,2
4	HR managers' talent philosophies: Antecedents and outcomes	Empirical 321 HR managers	1,2
5	The added value of the positive: A literature review of positive psychology interventions in organizations	Literature review	3
6	Effects of a strengths intervention on general and work-related well-being: The mediating role of positive affect	Empirical 116 employees	3, 4
7	Enhancing psychological capital and personal growth initiative: Working on strengths or deficiencies?	Empirical 105 students (Experiment 1) 90 students (Experiment 2)	5

Chapter 4 presents the results of a cross-sectional survey study among more than 300 HR directors. Based on the data, I investigated whether the four talent philosophies which were proposed in Chapter 3 exist among HR directors, and whether these philosophies have the expected relationships with talent-management practices (cf. propositions of Chapter 3).

In **Chapter 5**, the focus of attention shifts from talent management to positive psychology. This chapter encompasses a systematic literature review of empirical studies in which the effects of positive psychology interventions on working people were investigated in a (quasi-) experimental way. Based on the findings of 15 empirical studies, implications for theory and practice, and possibilities for future research are discussed.

Chapter 6 and **Chapter 7** present the results of three longitudinal field experiments in which the effects of strengths interventions on diverse outcome variables were examined. In Chapter 6, I investigate whether a strengths intervention increases the general- and work-related well-being of working people (N = 116), and whether positive affect mediates this relationship. The two quasi-experiments described in Chapter 7 (N = 105; N = 90) aim at comparing the effects of an intervention in which graduate students work on their strengths to the effects of an intervention in which they work on their deficiencies. I investigate direct effects of both interventions on students' personal growth initiative as well as indirect effects via the mediator psychological capital (self-efficacy, hope, optimism, and resilience).

Finally, in **Chapter 8,** the findings of all previous chapters will be summarized and integrated to answer the question whether a strengths-based approach to talent management can be of added value to organizations.

SCIENTIFIC RELEVANCE

This dissertation furthers the scientific understanding of talent and talent management as well as of strengths-based approaches/positive psychology in organizations. Both are relative young research fields: Talent management has been described as a research field still in its infancy with slight progress towards adolescence (Thunnissen, Boselie, & Fruytier, 2013a), and research on positive psychology only gained momentum after a landmark introductory article published at the turn of the century (Seligman & Csikszentmihalyi, 2000). The field of talent management, in particular, has long been lacking clear definitions, theoretical frameworks, and theoretically derived research propositions (Collings & Mellahi, 2009; Lewis & Heckman, 2006). In this dissertation, I address this gap in theory by exploring how the lack of clarity with regard to the definition of talent might affect the lack of clarity with regard to defining and designing talent management. Such theoretical work on the definitions of talent and talent management is needed as a foundation for future empirical work on talent management.

In contrast to the (mainly) theoretical contribution to the research field of talent management, the contribution of this dissertation to the scientific field of positive psychology is based on empirical work. First and foremost, this dissertation aims to create an overview of the existing empirical work on positive psychology in organizational contexts and to summarize the conclusions one can draw based on this work. Furthermore, this dissertation aims at expanding the body of empirical work through three quasi-experimental studies in which the effects of strengths interventions on variables such as well-being, psychological capital, and personal growth initiative are investigated. These studies are among the first to focus on other outcomes of strengths interventions than general well-being, and to address mechanisms through which these interventions operate. In addition to the scientific contribution to the fields of talent management and positive psychology separately, this dissertation is, to the best of my knowledge, among the first scientific works to explore the role that positive psychology could play in talent management (Swailes et al., 2014).

PRACTICAL RELEVANCE

Even though HR managers give talent management high priority, they struggle to implement it in an effective/efficient way. This dissertation aims at providing them with some clear, scientifically underpinned guidelines on how to design talent-management systems or practices. Furthermore, this dissertation addresses the raising interest of practitioners in strengths-based approaches. As an example of this growing practitioner interest, consider a recent organizational change initiative by a large Dutch bank: within this bank, a formerly exclusive talent-management system is remodeled into an inclusive one. Notwithstanding pioneers as this bank, the vast majority of organizations hesitate to adopt strengths-based approaches as long as scientific evidence of their effectiveness is scant and inconclusive. The empirical articles in this dissertation strive to contribute to the empirical knowledge base organizations can draw upon when contemplating whether to implement inclusive or strengths-based talent management.

CHAPTER 2

TALENT — INNATE OR ACQUIRED?
THEORETICAL CONSIDERATIONS AND THEIR IMPLICATIONS FOR TALENT MANAGEMENT

ABSTRACT

In order to contribute to the theoretical understanding of talent management, this paper aims to shed light on the meaning of the term 'talent' by answering the following question: Is talent predominantly an innate construct, is it mostly acquired, or does it result from the interaction between (specific levels of) nature and nurture components? Literature stemming from different disciplines has been reviewed to summarize the main arguments in support of each of the three perspectives. Subsequently, these arguments are mapped on a continuum ranging from completely innate to completely acquired. We argue that an organization's position on this continuum entails important implications for its design of talent-management practices, which we discuss extensively. By providing guidelines on how an organization's talent-management system can be shaped in accordance with their respective talent definition, this paper is particularly useful to HR practitioners.

Keywords: nature, nature-nurture interaction, nurture, talent management

Chapter is based on:

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Organizations worldwide are facing the challenge of managing talent effectively. In light of the current economic downturn and volatile market environments, talent management has become an ever more important tool to gain a sustained competitive advantage through human capital (Collings & Mellahi, 2009; Tarique & Schuler, 2010). Despite its importance, recent research by practitioner-oriented institutions such as The Chartered Institute of Personnel and Development (CIPD) has found that only a small percentage of organizations (6%) consider their talent-management systems to be very effective (CIPD, 2012). One reason for this lack of effectiveness might be the sparse theoretical and empirical knowledge base that talent management draws upon. Reviews of the academic literature on talent management have concluded that the research field still misses stringent definitions, theoretical frameworks, and empirically based recommendations for use in practice (Collings & Mellahi, 2009; Lewis & Heckman, 2006). The basic question, "What is talent?" has been left unanswered, and this appears to be the crux of the conceptual obscurity within the talent management field (Reilly, 2008). On that account, we reason that in-depth theoretical work on the nature of talent is needed to dissolve the conceptual ambiguities regarding talent management and, eventually, to make talent management more effective in practice.

The article at hand is amongst the first to address this need for theoretical work on the topic of talent. More specifically, it focuses on the extent to which talent is conceptualized as an innate versus an acquired construct (cf. Tansley, 2011), and this focus is important for three reasons. First, scholars who investigate talent or talent-related constructs still disagree as to whether talent is mainly determined by innate factors or by learning opportunities (Dai, 2009; Dai & Coleman, 2005; Howe et al., 1998). Although most scholars agree that talent comprises both innate and acquired components, they differ greatly in the extent to which they ascribe importance to either one component or the other (Walker, Nordin-Bates, & Redding, 2010). Conventional definitions of talent used by those scholars can therefore be placed on a continuum ranging from completely innate to completely acquired, but such a continuum still needs to be described. Second, we argue that the position of talent on the innate-acquired continuum has important implications for talent management in practice and can solve some of the ambiguities that still characterize the field. One of the most prevalent ambiguities, for instance, refers to how 'exclusive' talent management should be (Iles, Preece, et al., 2010; Lewis & Heckman, 2006). While many scholars have a strong preference for exclusive talent-management approaches, which are directed at a small, elitist percentage of the workforce only—the high potential, highly performing, or strategically important employees (Boudreau & Ramstad, 2005; Collings & Mellahi, 2009)—others are in favor of more inclusive talent-management approaches that are directed at the whole workforce (Buckingham & Vosburgh, 2001; Yost & Chang, 2009). Choosing either one of these approaches might be easier when keeping in mind that the assumption of innate talent also holds that a few employees are endowed with certain qualities while others are not. In contrast, defining talent as mainly acquired implies that any person can become an excellent

performer in almost any field. Consequently, defining talent as rather innate implies exclusive talent-management practices, while defining talent as mainly acquired calls for rather inclusive approaches to talent management. Third, we propose that the definition of talent as mainly innate or mainly acquired has many further-reaching consequences for the acquisition, identification, and development of talent in organizations. When assuming that talent is innate, for instance, talent management might focus much more on the identification and recruitment of talented employees than on their development. When assuming that talent can be developed, in contrast, talent management might have a strong focus on the training and development of employees, and selection decisions might be based on applicants' prior learning experiences.

In summary, this article serves two purposes. First, it aims to deepen the theoretical understanding of the concept of talent by providing a systematic overview of scholarly work dealing with the nature of talent. This work will be arranged according to its respective position on the previously proposed innate-acquired continuum. In doing so, this article represents an important contribution to the theoretical literature on talent management and a sound basis for future theoretical and empirical work. Second, it seeks to illustrate the implications of considering talent as rather innate or acquired for talent management in practice. Thereby, this article provides important practical guidelines that facilitate the compilation of more effective talent-management systems.

WHAT IS TALENT? HISTORICAL AND THEORETICAL PERSPECTIVES

The term "talent" dates back to the ancient world (from Greek *talanton*; Latin *talenta*) where it was used to denote a unit of weight or money ("Talent," n.d.a; Tansley, 2011). Subsequently, the meaning of talent underwent a considerable change, standing for an inclination, disposition, will, or desire by the 13th century ("Talent," n.d.a). In the 14th century, talent then adopted the meaning of a special natural ability or aptitude, which was probably based on figurative interpretations of the Parable of the Talents (Matthew 25:14–30) ("Talent," n.d.a). The subtext of this parable conveys that talents—whether they are interpreted as monetary units or natural abilities—are valuable and should not be wasted, and this moral still applies today.

In today's dictionary, talent is defined as "a natural ability to be good at something, especially without being taught" ("Talent," n.d.b). This definition implies that talent is innate and still bears strong resemblance to the meaning of talent in the late middle ages. Even though the apparent meaning of talent has been constant for several centuries, there are many latent uncertainties about it. If you asked lay people whether they considered Einstein talented, for instance, they would most likely answer in the affirmative. Einstein himself, however, stated the following: "I know quite certainly that I myself have no special talent; curiosity, obsession and dogged endurance, combined with self-criticism, have brought me to my ideas" (Albert

Einstein, quoted in Mih, 2000, p. 4). Similarly, the understanding of the term talent in the context of talent management also varies greatly (Dries, 2013; Gallardo-Gallardo et al., 2013): One finds, for instance, conceptualizations of talent as high potential, as high leadership ability, or as competency. Even studies that investigate talent-management approaches of similar organizations emphasize different factors that are considered for talent identification. In some multinational corporations (MNCs), for example, talent identification depends on factors such as performance ratings (Mäkelä, Björkman, & Ehrnrooth, 2010). In other MNCs, by contrast, talent identification depends on cultural fit and employees' values (Stahl et al., 2012).

In many other studies in the field of talent management, authors have handled the concept of talent as if it was commonly understood; that is, they have not further specified its meaning at all (Reilly, 2008). The aim of this paper is to gain insight into the specific nature of talent. To this end, we conducted an online literature search limited to articles that have the word "talent" in their title and that were published in peer-reviewed journals. This search resulted in 1023 publications in total (PsychINFO = 631; ABI/Inform = 392), which differ greatly in terms of their theoretical background. While some publications have a background in strategic human resource management (SHRM), others are rooted in the field of education, with a more specific focus on the identification and development of talented students in schools (Abbott, Collins, Martindale, & Sowerby, 2002; Walker et al., 2010; Walker & LaRocco, 2002). Other publications again belong to the emerging field of positive psychology and focus on individual character strengths and virtues (e.g., Buckingham & Vosburgh, 2001). Even though these literature streams do not always relate to human resource management (HRM), they have generated in-depth considerations on the nature of talent (Dries, 2013), which has allowed us to gain new and helpful insights into the topic.

Important Theoretical Approaches to Talent

In the following sections, we will provide a short description of the five most salient approaches to talent within the different literature streams we examined: Talent seen as giftedness, individual strength, (meta-) competency, high potential, and high performance. An overview of the approaches can be found in Table 1. Out of those five approaches, only the latter three are specifically related to the work context; the former two have been studied in diverse contexts.

Table 1
Summary of Important Approaches to Talent and Their Main Characteristics

	Approach to talent				
	Giftedness	**Strengths**	**(Meta-) Competencies**	**Potential**	**Performance**
Science domain	Education	Positive Psychology	HRM	HRM	HRM
Seminal authors	Ericsson, K.A. Gagné, F. Galton, F., Sir Renzulli, J. Sternberg, R.J. Terman, L.	Biswas-Diener, R. Buckingham, M. Kashdan, T.B. Peterson, C. Seligman, M.E.P.	Boyatzis, R.E. Briscoe, J.P. Eichinger, R. W. Hall, D.T Lombardo, M. M. Mahoney, J. D. Spreitzer, G. M.,	Church, A.H. Silzer, R. McCall, M. W	Altman, Y. Welch, J. Grote, D.
Population of interest	Children, adolescents, adults	Children, adolescents, adults	Working adults	Working adults (mostly younger workers)	Working adults
Position in nature-nurture debate	Ongoing debate about nature vs. nurture; several approaches highlighting nature-nurture interactions	Innate basis, yet to some extent developable	Knowledge and skills can be developed; abilities and some other personal characteristics are innate	Mainly based on innate factors, but can (and needs to be) developed	
Position in inclusive-exclusive debate	(Highly) exclusive (approximately 1- 10% of the population)	Inclusive	As concerns knowledge and skills: rather inclusive; as concerns abilities: rather exclusive	(Rather) exclusive	Exclusive

Talent as giftedness

Literature on giftedness mainly falls under the research domain of education and deals with individuals who achieve outstanding performance levels in sports, music, mathematics, physics, chess, arts, general memory tasks, and other domains. Those individuals are commonly said to possess extraordinary talents or special gifts that allow them to display outstanding skills in a specific domain (Vinkhuyzen, van der Sluis, Posthuma, & Boomsma, 2009). Giftedness is assumed to be rare, and only very accomplished individuals like Mozart have been mentioned as displaying true giftedness. The majority of giftedness research is conducted with children or adolescents and seeks to explain why giftedness emerges (at early ages) and how the education of gifted children can be amended. In comparison to the other literature streams presented in the following sections, the research field of giftedness stands out due to its sound theoretical basis consisting of several well-known models and frameworks. However, there is no consent amongst giftedness researchers about the concrete meaning of the term (Passow, Mönks, & Heller, 1993; Stoeger, 2009) and the extent to which extraordinary proficiency in a field is innate or acquired (Howe et al., 1998).

Talent as strength

Literature on strengths belongs to the recently emerging scientific field of positive psychology defined as the "science of positive subjective experience, positive individual traits, and positive institutions" (Seligman & Csikszentmihalyi, 2000, p. 5). Strengths have been defined as "potentials for excellence" (Biswas-Diener, Kashdan, & Minhas, 2011, p. 106) and "characteristics of a person that allow them to perform well or at their personal best" (Wood et al., 2011, p. 15). They are usually conceptualized as trait-like constructs that are partly innate but can be developed to some extent (Biswas-Diener et al., 2011). Examples of strengths according to an established classification by Peterson and Seligman (2004) are creativity, kindness, prudence, gratitude, and justice. It is said that every individual possesses certain strengths and that the use thereof is accompanied by positive feelings such as invigoration, high energy, intrinsic motivation, authenticity, and self-fulfillment (Peterson & Seligman, 2004). Due to those positive effects, interventions to identify, develop, and use strengths are studied in diverse contexts such as schools, organizations, and health care, rehabilitation, and therapeutic institutions.

Talent as (meta-) competencies

Hoge, Tondora, and Marrelli (2005) defined a competency as "a measurable human capability required for effective performance" (p. 511). Competencies are referred to as behavioral manifestations of talent (Boyatzis, 2008), and they are commonly assessed in the context of leadership development, promotion decisions, and succession planning (Campion et al., 2011). Competencies consist of the building blocks knowledge, skills, abilities, and personal or other characteristics (Campion et al., 2011; Hoge et al., 2005). It has been proposed that

knowledge and skills can be developed by most people, while abilities and personal characteristics are rather stable. On a more abstract level, researchers have argued that the acquisition of competencies gets influenced by powerful, higher-level competencies, referred to as meta-competencies (Briscoe & Hall, 1999). Meta-competencies are constructs that facilitate individual learning, adaptability, and development; are required in a variety of jobs; and maintain their value even when drastic environmental changes occur (Briscoe & Hall, 1999; Lo Presti, 2009). Examples of meta-competencies are general intelligence (Schmidt & Hunter, 2000), learning agility (Briscoe & Hall, 1999; Lo Presti, 2009; Spreitzer et al., 1997), and emotional intelligence (Dries & Pepermans, 2007).

Talent as high potential

Potential is a commonly used term in the context of talent management and strategic HRM because it has sparked the curiosity of organizations and consulting firms equally (Silzer & Church, 2009b). Although the term is now widely used in the corporate world, grasping its concrete meaning is challenging, as is clearly defining it (Karaevli & Hall, 2003; Silzer & Church, 2009a). Potential denotes "the possibility that individuals can become something more than what they currently are" (Silzer & Church, 2009a), meaning that it is latent or not yet visible (Altman, 1997; Yost & Chang, 2009). This implies that potential has a partly innate basis but has to be developed to become manifest in outstanding performance. In general, potential is considered a scarce individual feature: Only a small percentage of the workforce commonly gets identified as having high potential (Ulrich & Smallwood, 2012).

Talent as high performance

In contrast to the perspective that talent denotes potential or possibilities for the future, talent can also be understood as a construct that becomes manifest in present actions and behaviours, or, in short, performance (Altman, 1997). Talent in this regard is defined by realized outputs, and not, as in other approaches to talent, by the inputs that are necessary to achieve a certain output (e.g., knowledge, skills, and abilities). Since performance outputs can be measured more easily than input factors like potential, it is a common organizational practice to use performance appraisals for the purpose of talent identification (Dries & Pepermans, 2008). Moreover, the importance of employee performance has been demonstrated within literature on forced ranking approaches in which the relative best performers are extensively rewarded whereas the relative worst performers are laid off (Grote, 2005; Welch & Welch, 2005). In general, the notion of performance appraisal for talent identification can be found throughout the diverse literature streams that we have described in the previous sections because most acknowledge that talent becomes manifest in performance (e.g., Subotnik, Olszewski-Kubilius, & Worrell, 2011).

MAIN ARGUMENTS SUPPORTING DIFFERENT PERSPECTIVES ON THE NATURE OF TALENT

After having identified the literature streams dealing with talent, we searched them for common arguments supporting the notions that talent is either mainly innate, mainly acquired, or the result of nature-nurture interactions. We placed those arguments on a continuum ranging from innate to acquired talent, and a graphic representation of this continuum can be found in Figure 1.

Main Arguments Supporting the Nature Perspective

In this section, we will present theories and evidence by researchers who advocate the innate nature of talent. Note, however, that none of these authors completely neglects the role of practice and development in becoming an excellent performer in a given domain. They mainly state that innate talent is a necessary (but not a sufficient) condition for reaching exceptional performance levels. In the following paragraphs, we will summarize some of the main arguments in support of the assumption that talent is (at least partly) innate. We ordered those arguments in such a way that the arguments placing the greatest emphasis on innate features are discussed first.

High talent means high intelligence and this is proven to be genetically determined

Lewis Terman, the first scholar who conducted extensive longitudinal studies on gifted children and their development, linked talent to intelligence in an inextricable way by defining giftedness as belonging to the top 1% of intelligent children (1925; Terman & Oden, 1959). More recent talent definitions often include multiple factors that contribute to superior performance, but intelligence is usually one of them. It has, for instance, been proposed and confirmed by preliminary evidence that general intelligence, domain specific skills (e.g., musicality), and practice are prerequisites for achieving exceptional performance levels (Detterman & Ruthsatz, 1999; Ruthsatz, Detterman, Griscom, & Cirullo, 2008). As intelligence appears to be an important talent component, and as heritability indexes for intelligence range between .60 and .80 (Bouchard, 1998), one can argue that talent needs to be at least partly innate. Given those high heritability indexes, this argument can be found on the far left side of the continuum in Figure 1.

The link between intelligence and talent—as manifested in high performance—has also been put forward by literature related to the working environment. In particular, this literature reports that either intelligence or general cognitive ability commonly gets assessed during hiring processes, for promotion decisions, and for executive development (Briscoe & Hall, 1999; McLagan, 1997). The reason for assessing intelligence within these contexts is the close link between intelligence and work performance. Meta-analytic findings reveal that general intelligence is the most valid predictor of future job performance for a broad variety of jobs and job levels (Schmidt & Hunter, 1998, 2000, 2004).

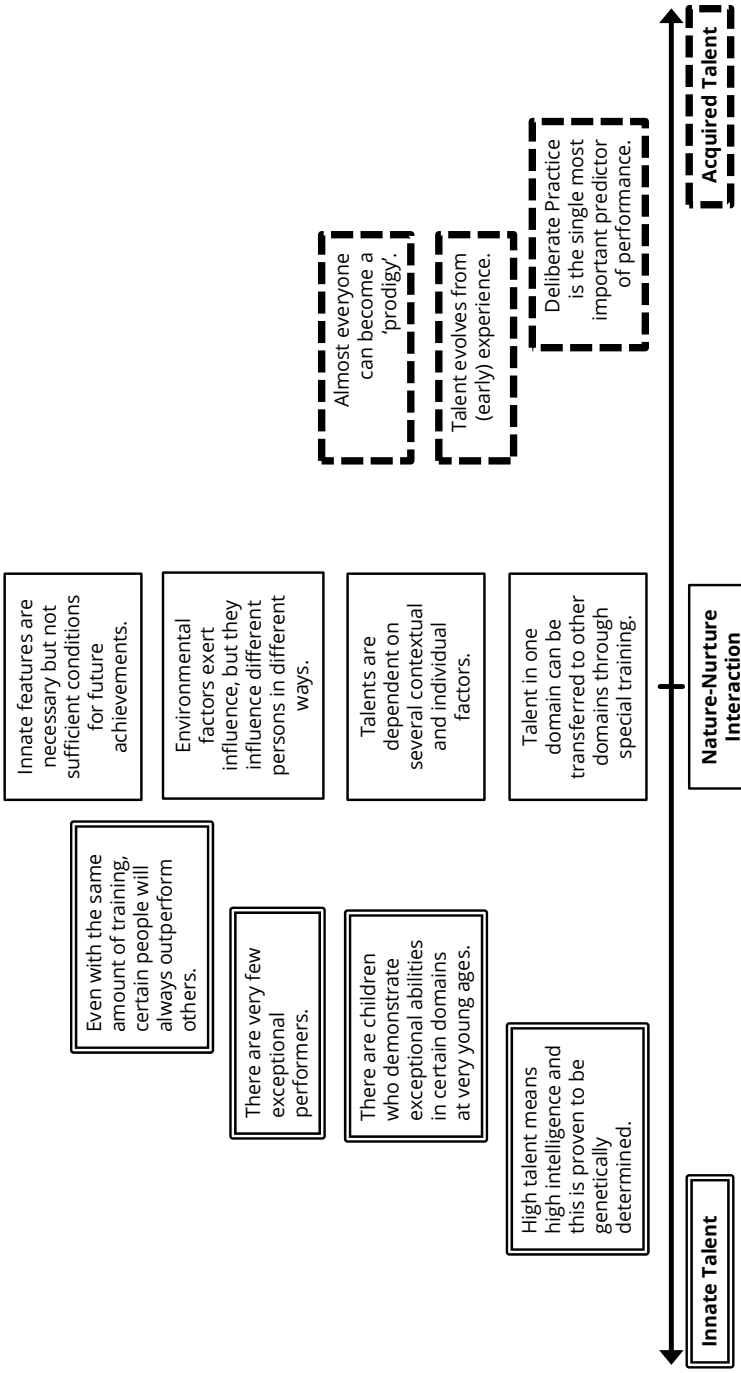

Figure 1. **Common arguments regarding talent mapped on the innate-acquired continuum**

There are children who demonstrate exceptional abilities in certain domains at very young ages

A common argument for the existence of innate talent stems from the field of giftedness research and refers to child prodigies. Child prodigies have been defined as "children under 10 years of age who perform culturally relevant tasks at a level that is rare even amongst highly trained professional adults in their field" (Ruthsatz & Detterman, 2003, p. 509). As those children display exceptional abilities at an extremely early age—an age that naturally limits the hours of training and practice that they could possibly have accumulated—innate talent must at least partly account for their early achievements (Feldman & Katzir, 1998). One of the most famous prodigies is Wolfgang Amadeus Mozart who, according to anecdotal evidence, composed his first piece of music at age four (Abbott et al., 2002). Over the course of time, researchers have gathered many cases and examples of prodigies in diverse fields of expertise. Amongst them we find the chess grandmaster Bobby Fisher who, at the age of seven, was not interested in other children unless they played chess (Brady, 1989), and the autistic girl Nadia who produced drawings of horses in her early childhood, demonstrating that her ability to draw was many years ahead of her age (Selfe, 1977; Winner & Drake, 2013).

In summary, this argument describes innate factors as the main determinants of talent, while it also acknowledges the importance of practice and training. Therefore, this argument has been placed in between the innate end and the center of the continuum in Figure 1.

There are very few exceptional performers

The rare occurrence of talent has been illustrated within the literature on giftedness and work performance. Giftedness scholars argue that the number of gifted people is quite restricted, with estimated percentages ranging from 1 (Terman, 1925) to 10% (Gagné, 2004) of people (compared to persons of the same age). These low percentages led giftedness scholars to reason that nurture does not play a major role in the formation of talent. Protzko and Kaufman (2010) elucidated this line of reasoning: In general, many ambitious parents enable and encourage their children's development in diverse domains, but there are many more ambitious parents than prodigies. This connotes that a nurturing environment cannot account for much variance in talent, but innate factors can.

Work performance literature also promotes the idea that only few employees are capable of high performance. In today's organizations, considerable efforts are undertaken to identify employees with high performance, high potential, or talent. Performance appraisal, for example, is one of the most widely applied human resources (HR) practices (Guest, Conway, & Dewe, 2004). Based on this appraisal, companies differentiate between A, B, and C players; top, average, and bottom performers; or high potential versus average employees (e.g. Axelrod, Handfield-Jones, & Michaels, 2002). Ulrich and Smallwood (2012) estimated that only 10–15% of employees are high potentials. Similarly, only 20% of the workforce is typically

classified as A players, 70% as B players, and 10% as C players (Welch & Welch, 2005). The latter 20-70-10 rule is often used in combination with a forced ranking approach in which an employee's performance is evaluated in relation to the performance of his or her peers (Grote, 2005; Welch & Welch, 2005). Usually, such an approach results in high rewards for the top 20% of the workforce and contract terminations for the bottom 10% who have to leave to make more room for talent (Grote, 2005). The aforementioned norms or rules of thumb about the relatively rare occurrence of talent in organizations are also prevalent in the perceptions of employees with high-potential status themselves and other organizational representatives; both groups indicate that they see high-potential employees as a small and elite part of the general workforce (Dries & Pepermans, 2008).

Just as the previous argument, this approach is placed between the innate end and the center of the continuum in Figure 1 because innate factors are seen as the main determinants of talent, while the facilitating role of training is not completely neglected.

Even with the same amount of training, certain people will always outperform others

More than a century ago, Sir Francis Galton (1869) proposed that training can only enhance an individual's mental as well as physical capacity to a certain, predetermined degree. According to him, nature sets limits to the maximum performance that can be achieved through training (Galton, 1869). As an example, Galton describes the final examinations of mathematicians at Cambridge. They take place after three years of study or, in other words, three years of equal training for everyone. Nevertheless, the performance differences between the mathematicians are striking: The best mathematician can gain twice as many points as the second best mathematician and up to 30 times as many points as the lowest ranking mathematician (Galton, 1869).

In more recent literature on giftedness, we find comparable assumptions about an innate factor that sets limits to the ease, speed, or rate of individual learning. In this regard, the definition of talent as "an innate ability or proclivity to learn in a particular domain" (Winner & Drake, 2013) can be mentioned as an example. This definition implies that talented individuals will learn at a faster rate in the domain of their talent than their non-talented peers. Giftedness literature also provides evidence for the assumption of an innate factor that facilitates learning: Studies reveal that there are substantial differences in the amount of practice that chess players need before they achieve the master or grandmaster level (Gobet & Campitelli, 2007; Howard, 2008).

Individual differences in the proclivity to learn have also been acknowledged by scholars who investigate talent in the organizational context, particularly scholars who investigate meta-competencies. By definition, all meta-competencies facilitate the acquisition of other competencies (Briscoe & Hall, 1999). However, learning agility is the meta-competency that is most commonly mentioned in the context of learning. Learning agility has been defined as

an individual's "willingness and ability to learn new competencies in order to perform under first time, tough, or different conditions" (Lombardo & Eichinger, 2000, p. 323). People differ considerably in their level of learning agility (Lombardo & Eichinger, 2000), and differences in learning agility have often been highlighted as valid predictors of individual career success (Eichinger & Lombardo, 2004; Lombardo & Eichinger, 2000; Spreitzer et al., 1997). Beyond, learning agility is considered to be a crucial feature of successful leaders because it allows them to react adequately to today's highly dynamic business environments (Spreitzer et al., 1997).

In summary, the above-mentioned literature frankly acknowledges the capacity of training to enhance performance, but it states at the same time that this enhancing capacity is limited by innate features. Therefore, this argument is placed closer to the center of the innate-acquired continuum than the previous arguments (Figure 1).

Main Arguments Supporting the Nurture Perspective

In this section, the central arguments in favor of talent acquisition will be presented. Just as advocates of innate talent do not completely deny the effect of practice, proponents of talent acquisition do not completely repudiate the notion of certain innate factors impacting ultimate performance levels. However, they still consider training, development, and experience to be the main reasons for achieving excellent performance. According to these scholars, variance in talent is explained by nurture for more than 50%. Once more, we will start with those arguments that take the most extreme position on the innate-acquired continuum in Figure 1, meaning that they attribute talent mainly to nurture.

Deliberate practice is the single most important predictor of performance

Several giftedness researchers have claimed that there is not a single individual who has ever reached an excellent performance level in mathematics, chess, music, or sports without practicing for thousands of hours (Howe et al., 1998). For instance, 10 years of training is required before chess players reach the grandmaster level (Simon & Chase, 1973). Therefore, many researchers argue for training and practice as main determinants of talent (e.g. Ericsson, 2007; Ericsson & Charness, 1994; Ericsson, Krampe, & Tesch-Römer, 1993; Ericsson, Nandagopal, & Roring, 2009; Howe et al., 1998; Sloboda, Davidson, Howe, & Moore, 1996). In particular, the role of deliberate practice, defined as "practice that (1) is primarily directed at performance improvement, (2) is of adequate difficulty, (3) involves informative feedback, and (4) provides ample opportunity for repetition and correction of errors" (de Bruin, Smits, Rikers, & Schmidt, 2008, p. 474), has been stressed. According to Ericsson et al. (1993), the amount of time that an individual engages in deliberate practice is monotonically related to his or her performance (i.e., monotonic benefits assumption). Several studies corroborate this proposition. The amount of practice has been found to account for the achievements of, for instance, musicians (Ericsson et al., 1993; Sloboda et al., 1996), soccer and field hockey

players (Helsen, Starkes, & Hodges, 1998), chess players (de Bruin et al., 2008), and everyday typists (Keith & Ericsson, 2007).

Building on the work of Ericsson and his colleagues, the importance of deliberate practice has also been stressed by organizational researchers. Day (2010) recently argued that deliberate practice has often been overlooked as an important factor for the development of leadership talent. Management guru Geoff Colvin (2010) has even published a book in which he claims that everyone can become a top performer like Jack Welsh if he only invests sufficient time in deliberate practice.

In summary, since it has explicitly been stated by Ericsson, Prietula, and Cokely (2007) that no innate factors except for height and body size influence performance, this argument is placed very close to the acquired end of the continuum in Figure 1.

Talent evolves from (early) experience

Advocates of nurture as the cornerstone of talent claim that early ability alone is not a proof of innate talent, at least if the possibility of learning opportunities cannot be ruled out (Howe et al., 1998). Within the literature on giftedness, it has been proposed that child prodigies are merely the result of their early experiences. In other words, there is doubt as to whether presumed child prodigies would have excelled without the special opportunities and encouragement they received during childhood (Howe, 1999; Howe et al., 1998). It is, for example, known that Mozart's father was an ambitious musician who dedicated a lot of time and energy to the musical education of his two children (Therivel, 1998). Thus, Mozart was provided with numerous learning experiences from a very early age. Giftedness scholars argue that these unique learning experiences account for the extreme musicality Mozart displayed during childhood and for his tremendous performance as a composer in his later years. Empirical evidence for this claim can be found in a study by Davidson, Howe, Moore, and Sloboda (1996). The authors found that the best students, those who displayed the greatest mastery of a musical instrument, had parents who were highly supportive of the musical education of their children.

The importance of gaining experience has also been stressed in literature on (leadership) potential. McCall (1994, 1998), for instance, considered learning from experiences indispensable for attaining the necessary competencies that qualify a future leader. Talent, in his opinion, is the ability to learn as much as possible from the experiences that are offered. In this regard, talented individuals possess a specific set of characteristics: actively looking for learning experiences, trying to gain a broad understanding of management, considering problems from new perspectives, taking risks, seeking feedback, and learning from mistakes, amongst others (McCall, 1998). Empirical evidence in support of this perspective can be found in studies on leader derailment and leader success. First, it has been revealed that employees who solely rely on those skills they already have instead of learning new ones are

more likely to fail in later career stages (McCall & Lombardo, 1983). Second, Arvey, Rotundo, Johnson, Zhang, and McGue (2006) found that 30% of the variance in leadership role occupancy was explained by genetic factors (latent potential), whereas the lion's share of variance (70%) was explained by environmental influences (experiences, training).

In summary, this argument implies that nurture has a much heavier weight than nature when it comes to explaining talent, but it also implies that some innate factors might be conducive to learning from experience. Therefore, this argument is placed in between the acquired end of the continuum and the center (Figure 1).

Almost everyone can become a 'prodigy'

The behaviorist John B. Watson once argued that he could transform any healthy child into an expert in any field of proficiency, if he only had the possibility to raise them in his own specified environments (Watson, 1924). On a related note, researchers have argued that many parents might be able to 'produce' a child prodigy if they are willing and capable to dedicate sufficient energy to their child's education (Howe, 1990). An often cited example for this supposition is the Ospedale della Pietà, an orphanage in 18th century Venice (Abbott et al., 2002; Sloboda, Davidson, & Howe, 1999). At that time, orphans at this institution received a profound education in music and were taught by Antonio Vivaldi, amongst others. As a result, the institution brought forth a disproportionally high number of accomplished musicians and composers, which is unusual given the rare occurrence of accomplished musicians in the general population (Abbott et al., 2002; Sloboda et al., 1999). Empirical evidence for the assumption that everyone can become a prodigy can be derived from a number of studies conducted by Allan Snyder (2009). Based on the assumption that everyone has latent savant skills, he used low-frequency repetitive transcranial magnetic stimulation of the brain to artificially induce savant skills in study participants. His studies showed that this technique could temporarily enhance drawing and proofreading skills (Snyder et al., 2003) as well as numerosity (Snyder, Bahramali, Hawker, & Mitchell, 2006) in some, but not all, of his otherwise normal participants.

The notion that people can be developed to improve their performance is also prevailing in literature on potential. In today's organizations, people with potential are habitually trained for more advanced positions or for long-term future performance (Silzer & Church, 2010). Yost and Chang (2009) went so far as to claim that any employee can be developed into an excellent performer. The only prerequisite is that the organization facilitates the realization of individual potential by finding a position where employees can play to their strengths and by teaching them how to develop themselves.

Again, this argument makes a strong case for the importance of nurture in the development of expert performance. However, empirical evidence shows that it might be too strong a claim to suggest that everyone can become a prodigy. In addition, the issue of fit between

individual characteristics and the environment is addressed (Yost & Chang, 2009). Therefore, this argument is placed in between the acquired end of the continuum in Figure 1 and its center.

Main Arguments Supporting Nature-Nurture Interactions

Many recent theories of giftedness and talent reason that talent is formed through interactions between nature and environment, but they fail to specify the exact amount to which each of them contributes (e.g. Abbott et al., 2002; Gagné, 2004, 2010; Renzulli, 2005; Vinkhuyzen et al., 2009). Csikszentmihalyi (1998) summarized this idea by stating that "talent is not an all-or-nothing gift but a potential that needs to be cultivated to bear fruit" (p. 411). Several thoughts and theories brought forward by advocates of nature-nurture interactions as the basis of talent are discussed below. Since all the arguments support the notion of nature-nurture interactions, and therefore stress the importance of both innate and acquired talent, they are all placed at the center of the continuum in Figure 1.

Innate features are necessary but not sufficient conditions for future achievements

Several researchers have differentiated between a given innate talent on the one hand and, on the other hand, acquired talent that is displayed by experts and that can only be obtained through arduous practice (Clifton & Harter, 2003; Gagné, 2004). Both concepts are related to one another in that acquired talent always builds on innate talent. In order to make the differentiation between the two constructs more obvious, researchers have introduced different terms for both. The giftedness researcher Francoys Gagné (2004, 2010), for instance, used the term *giftedness* to refer to the possession of special innate abilities (gifts), and the term *talent* to denote "the outstanding mastery of systematically developed abilities (or skills) and knowledge in at least one field of human activity" (Gagné, 2004, p. 120). In the framework of his differentiated model of giftedness and talent (DMGT), Gagné (2004) furthermore specified that talents are built by enhancing innate gifts through learning and training. This process of transforming gifts into talent is called the developmental process. If the developmental process does not take place, innate gifts are wasted; they do not become manifest in excellent performance (Gagné, 2004). In other words, the DMGT implies that an individual can be gifted without being talented (she is extraordinarily musical, but she never became a successful musician because she never learned to play an instrument), but not the other way around (an unmusical person will never become a successful musician).

The general ideas of the DMGT about the interplay between innate and developed features of talent can also be found in other seminal models in the field of giftedness. In the framework of his wisdom, intelligence, creativity synthesized (WICS) model of giftedness, Sternberg (2003, p. 109) defined giftedness as "expertise in development". This definition implies that initial gifts have to be developed in order to evolve into exceptional performance or expertise (Sternberg, 2003, 2005). Similarly, the three-ring conception of giftedness

(Renzulli, 2005, 2012) holds that some individuals have the potential to display gifted behaviour (exceptional performance), while others do not. Individual potential is determined by the three factors (three rings) of above average ability, high task commitment, and high creativity. These factors are said to emerge from interactions between the person and the environment (Renzulli, 2005). A person who has potential, however, does not necessarily become a gifted performer. Therefore, Renzulli (2005) argued that educators have to stimulate the transformation of potential into excellent performance.

Similar arguments suggesting that both innate factors and development shape talent can be found in the literature on employee (high) potential. Potential denotes "the possibility that individuals can become something more than what they currently are" (Silzer & Church, 2009a, p. 379). This means that potential is a latent (not readily observable) factor that influences future developments (Altman, 1997; Yost & Chang, 2009). Potential is seen as a necessary precondition of future success, but it can only be fully realized if the potential is discovered, grown, and developed (Silzer & Church, 2009a). This implies that potential probably has an innate basis, which is necessary but not in itself sufficient to become efficient in a future organizational role. It has been argued that innate potential probably is the factor that sets the context or builds the framework for future developments (Altman, 1997).

Empirical evidence for the importance of both innate and acquired components of talent was delivered by Ruthsatz et al. (2008). The researchers found out that the combination of innate factors (i.e., general intelligence plus musical audiation) and accumulated practice accounted for more variance in musical performance than practice alone. Vinkhuyzen et al. (2009) conducted a twin study and found a considerable genetic contribution to talent and ability, although they acknowledged that practice is indispensable to perform at an extraordinary level.

Environmental factors exert influence, but they influence different persons in different ways

Several researchers have taken interest in the question of how genes and environment interact to shape manifest features or behaviors (Bronfenbrenner & Ceci, 1993; Papierno, Ceci, Makel, & Williams, 2005; Schmitt, Eid, & Maes, 2003). It has been argued that personal (e.g., personality traits) and environmental factors (e.g., education) do not simply add to one another; instead, one factor can amplify the effects of the other (Bronfenbrenner & Ceci, 1993; Papierno et al., 2005). In other words, the overall effect of person and environmental factors combined is bigger than the sum of their unique effects. This phenomenon has been referred to as the multiplier effect (Ceci, Barnett, & Kanaya, 2003) and the synergistic effect (Schmitt et al., 2003). The occurrence of such effects has, amongst others, been explained by selective attention and different thresholds for perceiving cues; by attitudes and values that motivate a person to emphasize information that is value-congruent and ignore information

that is not; and by memory biases that result from differences in the depth of information processing (Schmitt et al., 2003).

Papierno et al. (2005) proposed that the emergence of exceptional abilities or talent can be explained by such multiplicative person-environment interactions or multiplier effects. Multiplier effects imply that small initial inputs from either the person or the environment can set into motion a chain of person-environment interactions that result in significant gains in a measurable outcome (Ceci et al., 2003). Consider a very creative and artistic girl as an example: As she likes to do creative work, she puts more effort into her paintings than her classmates at primary school. Her teacher appreciates her efforts and compliments her on her work. The encouraging words motivate the girl to further improve her paintings. She spends much of her free time on creative tasks so that her parents notice the continuous improvement of her drawings. They decide to send her to extracurricular art classes, where she further improves her technique. Eventually, she is accepted to art school because her drawings reflect a much higher level of expertise than the drawings of her same-age peers.

In order to explain why some individuals can develop into extraordinary performers and far surpass ordinary people, Papierno et al. (2005) furthermore refer to the Matthew effect. The Matthew effect owes its name to the biblical passage, "For to everyone who has, more shall be given, and he will have an abundance; but from the one who does not have, even what he does have shall be taken away" (Matthew, 25:29). This implies that individuals who possess a great deal (e.g., in terms of resources, abilities, health) will amplify their possessions to a disproportional extent as compared to individuals who possess much less. Therefore, the Matthew effect helps to explain why initial, linear differences between people or environments will not result in linear differences in outcomes (Papierno et al., 2005). Put simply, this means that a given level of initial environmental stimulation (e.g., piano lessons) can lead to high ability gains of a person who disposes of a strong genetic predisposition to respond to this stimulation (e.g., musicality) and, in the most extreme case, to no ability gains of a person with a slightly lower genetic predisposition.

Taken together, Papierno et al. (2005) argue that the emergence of talent strongly depends on minor genetic or environmental inputs and the chain of person-environment interactions they trigger. Moreover, the initial inputs play a decisive role because they limit the maximum performance level that an individual can eventually achieve.

Talents are dependent on several contextual and individual factors

The argument that talent cannot be disentangled from contextual and individual variables (Abbott & Collins, 2004; Abbott et al., 2002; Biswas-Diener et al., 2011) partly builds on and overlaps with the argument that specific innate talent factors will only result in superior performance if they are developed or refined. This implies that initial talent or innate potential can be wasted if the context is not conducive to its development and/or if certain

individual factors are lacking (Abbott & Collins, 2004; Biswas-Diener et al., 2011). Abbot and Collins (2004) specified that facilitating contextual factors comprise parental support, adequate training facilities, and effective coaching, whereas facilitating individual factors include motivation and adequate learning strategies. Moreover, instead of only claiming that interactions between individual and environmental factors are necessary conditions for talent to emerge, it has also been argued that those interactions shape the specific manifestation of a talent. As an extreme example, Mozart may have developed into an Olympic rower if he had grown up in another context (Abbott et al., 2002).

Following this line of reasoning, strengths researchers have argued that strengths are not stable across time and situations like pure traits, but that they are highly dependent on contextual factors, personal values, interests, and other strengths (Biswas-Diener et al., 2011). It implies that the same strength can become manifest in multiple ways when owned by different individuals (Biswas-Diener et al., 2011). The strength 'bravery', for instance, might lead a person to become a firefighter, but just as well a high-altitude construction worker. The choice to become a firefighter then depends upon contextual factors (e.g., several family members are firefighters), personal values (e.g., serving the community), interests (e.g., adventures), other strengths (e.g., zest and optimism), or a combination of several of them.

Furthermore, strengths cannot be considered in isolation because the appropriateness or relevance of using a certain strength depends on contextual or situational factors (Biswas-Diener et al., 2011; Schwartz & Sharpe, 2006). Contrary to the general view that using strengths more is always better, several researchers have recently highlighted the possibility that overusing strengths could be harmful under certain circumstances (Biswas-Diener et al., 2011; Kaiser & Overfield, 2011; Schwartz & Sharpe, 2006). When changing work roles, for instance, it is often necessary to use different strengths or to use a particular strength to either a greater or lesser extent (Biswas-Diener et al., 2011). In particular, Kaiser and Overfield (2011) highlighted the tendency of leaders to use their strengths too much while neglecting behaviors that counter their natural talents. This eventually leads to lopsided leadership. Assertiveness, for instance, is generally desirable for a leader, but can lead to a demoralization of employees and performance drops if it is used excessively (Ames & Flynn, 2007; Kaiser & Overfield, 2011).

Talent in one domain can be transferred to other domains through special training (deliberate programming)

Case studies in the field of sports have recently stressed the potential benefits of a new approach to talent identification and development. This approach is labeled talent transfer and is based on the assumption that talent is innate and that the talent pool is limited. At the same time, talent is understood as a resource that can be refined through training and applied in different domains (Bullock et al., 2009). In particular, talent transfer implies that senior athletes in a given sport A are assessed against certain prerequisites for sport B that is

new to them. Selected candidates can become experts in the targeted sport B in a relatively short period of time (fast-tracking) if they are provided with extensive, high-quality training, the possibility to participate in competitions, and all other necessary resources (Bullock et al., 2009). Examples include athletes who switch from speed skating to road cycling, from gymnastics to diving, from sprinting to bobsled, and from weightlifting to shot-put (Gulbin, 2008). Bullock et al. (2009) described an extensive case study in which female athletes were developed into successful skeleton (sliding sport) athletes. The athletes were initially successful in sports such as track athletics and disposed of particular required capabilities for skeleton (e.g., fast sprinters). These study results provide support for the theory of talent transfer. It shows that a relatively late specialization in a specific sport is possible if specific requirements (e.g., muscle strength) are met (Bullock et al., 2009).

The idea of talent transfer might be readily applied to the work context. Rappaport, Bancroft, and Okum (2003) suggested that major talent shortages force organizations to apply more creative talent recruitment strategies. This implies that talent needs to be searched for amongst uncommon target groups, for instance, amongst older workers. In addition, the recruitment process needs to be based on very broad requirement profiles. These profiles only include knowledge, skills, and abilities that are hard to develop and indispensable for the job in question. By taking these measures, organizations will find more job applicants who have the potential to become excellent performers in a destined job. The theory of talent transfer suggests that their potential can be transformed into excellent performance in a limited amount of time and with limited effort. For instance, an elderly aircraft technician might be able to use a significant amount of his skills in a position as radiation technician in a hospital and might therefore be a good applicant (Rappaport et al., 2003).

IMPLICATIONS OF DIFFERENT TALENT DEFINITIONS FOR TALENT-MANAGEMENT PRACTICE

The understanding of talent as rather innate, rather acquired, or as the result of nature-nurture interactions holds important implications for the application of talent management in practice. It influences, for instance, whether talent management should focus more on the identification/selection or the development of talent (cf. selection and development perspectives, McCall, 1998). Within this section, we therefore aim to provide talent-management practitioners with practical guidelines as to where their organizations' definition of talent might be positioned on the innate-acquired continuum. Furthermore, we discuss implications for talent-management practice. We structure the implications according to the four aspects of talent management proposed by Dries and Pepermans (2008): identification of talent, training and development, succession planning, and retention management. Based on the work of other authors (Stahl et al., 2012), we added recruitment as a fifth aspect of talent management.

Determining an Organization's Position on the Innate-Acquired Continuum

As there is sufficient evidence supporting any position on the innate-acquired continuum, we do not presume to offer advice about the one best position on it. We do, however, think that an organization can position itself based on the type of talent that is needed, prior experiences, the labor market supply of talent, labor market regulations, and certain strategic considerations. To this end, a first step would be to answer important questions such as: *What kind of talent do we need in this organization? Do we, for instance, depend more on leadership or technical talent*? *Which critical positions do we want to fill with talented individuals? How scarce is the talent supply in the labor market? How easily can employees be laid off?* Finding answers to these questions might help experienced HRM practitioners to determine whether the needed talent can be developed with a limited amount of effort, or whether the development process would be rather complex and expensive.

More specifically, organizations might take into consideration whether they have a greater need for leadership or technical/expert talent. When talent management is mainly aimed at leadership talent, finding a position on the continuum might come down to the following philosophical question: Are leaders born, or are they made? When talent management is mainly directed at technical experts, a position on the rather acquired side of the continuum might be suggested, as technical positions require a great deal of specialized knowledge and skills that can be developed (Wanzel, Matsumoto, Hamstra, & Anastakis, 2002). However, an understanding of and an affinity for mathematics might be a prerequisite for the development of technical skills. In certain situations, organizations also find it troublesome to forecast future talent needs, especially when an organization operates in a highly dynamic context or when the organization is in its startup phase. In those cases, meta-competencies such as intelligence and learning agility, which influence the adaptability and flexibility of employees, might be central to talent management (Dries, Vantilborgh, & Pepermans, 2012). Moreover, in contexts where labor legislation hinders the suspension of staff members, organizations might embrace the notion that talent can be developed and pursue the strategy of bringing out the best in all employees. Then again, if the talent supply in the labor market is extremely scarce, organizations might consider possibilities that have been discussed in the context of nature-nurture interactions, such as transferring talent from one domain to another (Rappaport et al., 2003).

Once a position on the innate-acquired continuum has been determined based on the type of talent that is needed, implications for talent management can be derived as described in the following paragraphs. In general, we propose that the innate talent assumption implies that talent management has a strong focus on the identification and retention of talent, whereas the acquired talent assumption implies a strong focus on the development of talent. Furthermore, the interaction perspective implies that only those with innate talent are developed in the context of talent management.

Talent Management Based on the Assumption that Talent is Mostly Innate

The notion of innate talent is related to the 'war for talent' proclaimed by McKinsey consultants (Michaels et al., 2001, p. 1). The idea that talent is worth fighting for is based on the assumption that true talent cannot be developed and is therefore rare. Rare resources like talent are necessarily unequally distributed amongst the members of a population. In other words, some people (the minority) have talent while others (the majority) do not. Snell, Youndt, and Wright (1996, p. 65) argued that "if the types and levels of skills are not equally distributed, such that some firms can acquire the talent they need and others cannot, then (ceteris paribus) that form of human capital can be a source of sustained competitive advantage". Similarly, the resource-based view (RBV) of firms holds that organizations can derive competitive advantage from resources that are valuable, rare, inimitable, and non-substitutable (Barney, 1991), and all of those criteria apply to innate talent.

These arguments taken together make a strong case for implementing a talent-management system with an explicit focus on finding and attracting the best possible individuals and creating durable ties between those individuals and organizations. Therefore, the talent-management elements of recruitment, identification, and retention are of particular importance when talent is believed to be innate. In addition, a strong employer brand should be created to improve an organization's reputation as an employer and to attract sufficient amounts of qualified job applicants.

While both recruitment and identification refer to the process of finding talent, recruitment entails identifying and hiring talented external job applicants, whereas identification involves detecting talent amongst internal candidates (current members of the workforce). When talent is believed to be innate, both processes build on the assumption that some indications of talent must be observable and hence measurable as early as during childhood. Consequently, they are naturally distinct and visible at the time a person enters the job market. Therefore, talent management should arrange for a profound and elaborate talent recruitment and identification procedure that meets the following requirements (Mönks & Katzko, 2005): it is grounded in a theoretical model of talent (e.g., the WICS Model of Giftedness, Sternberg, 2005), it uses valid diagnostic instruments with high methodological standards (e.g., the Wechsler Adult Intelligence Scale-IV to measure intelligence; Wechsler, 2008), and it carefully deals with social preconceptions regarding, for example, women and minorities. An example for the latter point is the common assumption that women are inferior to men in mathematics, informatics, natural sciences, and technical sciences, even though research is not supportive of this claim (Mönks & Katzko, 2005). Not following such false social preconceptions is particularly important against the background of an increasing shortage of skilled workers because it requires that job applicants from highly diverse labor pools in terms of gender, race, and nationality are considered (Ng & Burke, 2005).

Aside from meeting the three requirements mentioned previously, talent identification and recruitment procedures benefit from taking intelligence into account. Organizations that assess intelligence in the context of talent identification act in line with evidence-based management, which has strongly been promoted by Pfeffer and Sutton (2006). Evidence-based management means that decisions in organizations "should be based on the latest and best knowledge of what actually works" (Pfeffer & Sutton, 2006, p. 63). Following this line of reasoning, intelligence should be assessed as an indicator of talent because a considerable amount of evidence has proven that general intelligence is the most important predictor of future work performance (Schmidt & Hunter, 1998, 2000, 2004).

Furthermore, the notion of innate talent is linked to specific suggestions for dealing with talented employees once they are identified or recruited. As organizations aim to prevent the turnover of talented employees, those suggestions mainly relate to retention management. One basic idea of retention management that has been proposed by several authors is the segmentation of the workforce and the differential treatment of employees (Becker & Huselid, 2006; Boudreau & Ramstad, 2005; Lepak & Snell, 1999). Workforce segmentation can be based on different factors. On the one hand, the HR architecture by Lepak and Snell (1999) differentiates employees according to their degree of uniqueness and strategic value. On the other hand, Becker and Huselid (2006) argued that highly talented employees are only valuable to an organization if they occupy positions that add to the organization's strategic objectives. As some positions in an organization potentially create more value than others, the authors advise a differentiated approach to managing employees according to the strategic importance of their jobs.

Workforce segmentation entails consequences for an employee's employment mode, the mutual employment relationship, and the HR configuration (Lepak & Snell, 1999). Lepak and Snell (1999) offer specific guidelines on how to deal with talented employees, or, in their own words, highly unique and valuable employees. First, they should be developed internally so that they mainly learn skills and acquire knowledge that cannot be transferred to other organizations. When talent is proposed to be innate, talent development is mainly aimed at conveying job-specific knowledge and easily acquired skills. Second, organizations should create organization-focused employment relationships with their talented employees that foster mutual investments by offering development opportunities and participation in decision-making processes (Lepak & Snell, 1999). Finally, the authors suggest applying commitment-focused HR systems in which staffing decisions are based on potential rather than on current performance, and in which career development and mentoring programs are in place (Lepak & Snell, 1999). Overall, such initiatives contribute to creating long-term ties between organizations and their employees and thus to increasing retention rates.

Similarly, Becker and Huselid (2006; see also Huselid & Becker, 2011) recommend that organizations make disproportional investments to fill strategic positions with top talent.

This implies investing in a well-functioning system for internal job applications, assessment centers to select the best individuals out of internal or external talent pools, and investments in training of the selected candidates. In order to guarantee the retention of these individuals, career opportunities need to be clearly communicated to talented employees. In addition, realistic expectations need to be created in annual performance appraisal meetings. Furthermore, individual performance in strategic positions must be critically assessed so that top-performers can be excessively rewarded, whereas disappointing performers are removed from their functions (Becker & Huselid, 2006).

Talent Management Based on the Assumption that Talent can be Acquired

If talent is procurable through training, talent management will endeavor to systematically grow talent. Holding the perspective that talent can be acquired means agreeing with the statement that "experts are always made, not born" (Ericsson et al., 2007, p. 116). Therefore, talent-management systems necessarily underline the importance of HR development and make use of a diverse set of HR practices that aim at expanding employees' knowledge, skills, and abilities. These practices include management skills training, challenging assignments, the provision of early leadership experiences, job rotations, coaching, and mentoring (cf. Dries & Pepermans, 2008). The main difference between talent management under the assumptions of acquired talent versus innate talent is the greater inclusiveness of the former approach. If talent is not based on innate factors, then potentially more people—or at the upper extremity, all people—can become talented.

For that reason, talent management in this context puts considerably less emphasis on talent identification and recruitment. Nonetheless, certain criteria influence the recruitment of new employees when vacant positions have to be filled. On the one hand, there are applicants who are in more advanced development stages than others because they have had the opportunity to develop relevant knowledge, skills, and abilities in the past. Such opportunities might include an applicant's education or other relevant prior experiences such as holding specific positions, living abroad, or managing certain projects. On the other hand, identification can be based on certain criteria that are indicative of one's ability to learn from experience, for instance, being curious about how things work, being adventurous, being biased towards action, and having an inclination to seek and use feedback (McCall, 1994).

Once employees are hired, talent management will emphasize their training and development. In some organizations, training and development initiatives might solely focus on particular employees. An organization that mainly depends on the performance of its technical experts, for example, can choose to extensively train all employees holding a degree in engineering, while providing only a standard package of trainings to other employees. In other organizations, training and development might be offered to all employees. The rationale for such an inclusive talent-management system is that every

member of an organization's workforce can potentially become a highly performing, highly valuable employee if the right kind of experiences or the right kinds of learning opportunities are offered. Furthermore, advocates of inclusive talent-management approaches argue that it should be the declared task of talent management to bring out the best in all employees. This can be accomplished by identifying the tasks specific employees are drawn to and by placing them in positions where they are challenged to unfold their potential (Buckingham, 2005; Buckingham & Vosburgh, 2001; Yost & Chang, 2009). In this regard, talent identification is not concerned with finding the few employees within an organization that are talented. On the contrary, it rather seeks to bring to light everyone's strengths or strength constellations so that they can be matched to adequate positions, tasks, and challenges (Buckingham, 2005; Yost & Chang, 2009). Yost and Chang (2009) specify that talent-management initiatives often fall short of capitalizing on the value of all employees because they solely focus on those workers who display leadership potential. According to the authors, it is advisable to include all employees in talent-management initiatives. This can be achieved by emphasizing the fit between a person and a job as one necessary condition for talent to emerge and by making use of stretch assignments, mentoring, coaching, networking, development plans, feedback, and reflection (Yost & Chang, 2009). These initiatives eventually teach employees to develop themselves.

Literature on the Pygmalion effect suggests that considering the whole workforce as talented, as suggested by Yost and Chang (2009), entails positive outcomes in terms of learning success. The Pygmalion effect assumes that one person's expectations of another are often fulfilled (Rosenthal, 2002). Meta-analytic findings support this assumption by showing that managers' positive expectations of subordinates enhance their subsequent performance (Kierein & Gold, 2000). For that reason, organizations that consider all of their employees talented might observe greater positive developments in their workforce after investing in training activities. In addition, the negative Pygmalion effect, or Golem effect, suggests that negative leader expectations lower subsequent subordinate performance (Oz & Eden, 1994). Therefore, these organizations also avoid performance losses of employees who have not been identified as having talent (for an in-depth discussion about perceived justice of talent management that differentiates between talented and untalented employees, see also: Gelens et al., 2013). Consequently, talent management should aim at establishing an organizational climate/culture where abilities are appreciated, where high expectations are created, and where success is anticipated.

Furthermore, training outcomes can be enhanced by optimizing factors such as the quality of the training or learning experience, the learning environment, and the transfer of training. To this end, the literature on learning from experience (McCall, 1998, 2010) and deliberate practice (Ericsson et al., 2009) can be consulted. The significance of learning from experience has particularly been stressed in the context of leadership development (McCall, 1998, 2010). McCall clearly stated that he considers experience the primary source of leadership talent,

and hence weakens the merits of genetics, training programs, and business schools for creating great leaders. Following McCall's (2010) line of thought, talent management should focus on experience-based development with on-the job learning as one of the driving forces of the development process. Moreover, the effects of experience-based learning are said to be greater when the experience is sufficiently challenging, when it is provided at the beginning of an employee's career, and when an employee is confronted with adverse conditions (McCall, 2010). Other experiences that are particularly beneficial to successful management development are short-term assignments, major line assignments, and either very good or very bad supervisors. According to McCall (2010), improving opportunities for experienced-based learning is inexpensive and efficient, as it does not require additional human resource development processes and programs to be implemented. The only prerequisite is that higher-level executives are committed to providing learning experiences, know which situations and assignments are valuable, and understand the lessons they can teach to whom (McCall, 2010).

Practical guidelines as to how training and development can be designed can also be derived from literature on deliberate practice (Ericsson et al., 1993). Within this literature, it has often been stated that developing expert performance is a time-consuming and complex process requiring an average of 10,000 hours of deliberate practice (Ericsson, 2009). Nonetheless, it has been shown that deliberate practice is an extremely effective learning tool (e.g., Keith & Ericsson, 2007). In order to benefit from deliberate practice, a training or any another learning experience should be designed in the following way: First, the learning experience should allow for trial-and-error learning and repeated execution of the same task. Second, it should be carried out in safe learning environments. Third, it should provide the learner with immediate, high-quality feedback about his or her performance. Fourth, it should be directed at those tasks that an individual cannot yet master (Day, 2010; Ericsson et al., 2009; Ericsson et al., 2007).

It has been claimed that even attributes that are believed to be rare and innate, such as charisma, can be developed by using deliberate practice (Ericsson et al., 2007). However, deliberate practice is an activity that is not inherently enjoyable (Ericsson et al., 1993); therefore, employees need to be motivated to engage in it. One possible way to motivate employees to engage in deliberate practice has been described in the literature on passion. Passion has been defined as "a strong inclination toward an activity that people like, that they find important, and in which they invest time and energy" (Vallerand et al., 2003, p. 756). Harmonious passion implies that an individual willingly chooses to pursue an activity and that this activity can be combined with other important aspects in life (Vallerand et al., 2003). Research has shown that engagement in deliberate practice is higher when individuals have a harmonious passion for particular tasks (Vallerand et al., 2007). Therefore, managers can motivate their employees to engage in deliberate practice by increasing their harmonious passion for their jobs. This can be achieved by giving individuals tasks that they value and by

providing a context in which the basic human needs of competence, autonomy, and relatedness are promoted (Vallerand & Houlfort, 2003). In particular, the work context should allow for interactions between employees, for effective functioning, and for some leeway to determine one's own course of action.

To ensure that the learning and development opportunities that an organization offers to its employees provide optimal benefits, organizations should also implement an elaborate training evaluation procedure and take measures to increase the transfer of training. Strong evaluation systems that embrace at least the second level of training evaluation proposed by Kirkpatrick (1979)—the level of individual learning—should be in place. Evaluation on the level of behavior and results would be even better. As those evaluations often imply that objective measurements take place before and after a training, that effects are compared with a control group, and that results are analyzed statistically (Kirkpatrick, 1979), training and development managers will benefit from collaborating with a statistician on such a task. In addition, the transfer of training can be enhanced by factors such as carrying out an adequate needs analysis, setting specific learning goals, developing trainings with relevant contents that stimulate behavioral practice and feedback, and providing technological support in the form of, for instance, e-coaching (Burke & Hutchins, 2007).

Finally, after having invested considerable resources in workforce development, organizations can try to optimally use their well-trained employees. CV databases of all employees can provide a good overview of the learning experiences that each worker has had and can therefore be a valuable tool for succession planning. HR managers can use the CV database to find out which employees have had the necessary experiences to take on a more challenging organizational role. In addition, job interviews or assessment centers can be used to test whether the required skills and competencies have been developed yet. Finally, some attention should also be paid to creating durable ties between organizations and those employees who have gained expertise due to training investments. However, according to the nurture approach, leaving employees can also be replaced by employees who had similar learning experiences in other contexts, which have been provided by other employers.

Talent Management Based on the Assumption that Talent Results from Nature-Nurture Interactions

When assuming that talent is the product of the interplay between genetic and environmental factors, talent managers can partly build on the implications for talent management mentioned above. Beyond, several practical implications are particularly relevant for the interaction perspective. The first implication concerns the recruitment of talented employees and draws from the literature on talent transfer (Bullock et al., 2009). Research on talent transfer has shown that talent in one domain can be transferred to other domains in a relatively short amount of time with limited efforts, but on the condition that

the two domains build on similar underlying, innate talents. Talent transfer is of particular importance in light of the lasting shortage of skilled workers. Organizations already reacted to this issue by starting to tap new labor pools and to recruit new groups of workers such as women, ethnic minorities, and elderly people that were previously seen as rather undesirable (Henkens, Remery, & Schippers, 2008). However, talent transfer provides arguments for implementing an even broader and more creative recruitment strategy (Rappaport et al., 2003). More specifically, recruiters can target individuals that are successful in any domains or work contexts. The only condition is that these individuals display specific features that are necessary for the position in question. Having those features as a foundation, applicants can become very successful in their destined organizational roles if they get trained accordingly.

In order to gain more knowledge about the nature of those basic or innate features and, more importantly, about the identification thereof, the literature on potential can be consulted. Potential is defined as a latent factor that has yet to be realized (Altman, 1997; Yost & Chang, 2009). The same applies to the innate talent features that have to be identified for successful talent transfer. Consequently, the assessment of potential or latent talent involves exploring a promise that has not been fulfilled yet and is thus rather complicated. Organizations often meet this problem by assessing potential based on performance appraisals (Pepermans, Vloeberghs, & Perkisas, 2003). However, this has been argued to be misleading because past performance cannot always predict future performance in different contexts (Silzer & Church, 2009a). Current performance might simply be a sign of great experience with a certain task and might therefore be unrelated to performance on different, more challenging tasks. Silzer and Church (2010) provide talent-management practitioners with several alternative suggestions to optimize the assessment of potential. First, the authors draw the readers' attention to the importance of the question, "The potential for what?" which calls for a differentiated potential assessment that is attuned to the destined organizational role. Furthermore, Silzer and Church (2009a) have developed a differentiated model in which they describe three dimensions of potential varying in stability over time. The first dimension is called foundational and includes rather stable and difficult to develop factors like personality and IQ. The second dimension includes factors that predict future learning and development such as adaptability, learning orientation, and motivation or drive. This dimension has been referred to as the growth dimension and its factors are also rather stable. The last dimension of potential is the career dimension, which includes those factors that can be developed over time, such as technical and functional knowledge and the ability to manage employees (Silzer & Church, 2009a). Very often, desired end-state competencies such as leadership skills can easily be developed if early indicators such as the proficiency to supervise small teams are present, or if an employee disposes of strong growth factors such as the motivation to perform well in a particular domain.

The three dimensions hold the following implications for talent management: First, talent identification should focus on factors belonging to the foundational and growth dimensions as indicators of potential. To this end, it can make use of assessments of intelligence, personality, and growth related factors, such as learning agility (Spreitzer et al., 1997). Second, once potential has been identified, development and training activities should concentrate on growing the factors that belong to the career dimension. The development of those factors can be facilitated by making use of deliberate practice and experience-based development as mentioned in the former paragraph. Moreover, many practical guidelines regarding employee training and development can be derived from the DMGT (Gagné, 2004) and the revised DMGT 2.0 (Gagné, 2010). Both models distinguish between exceptional abilities with strong biological roots (gifts) and acquired exceptional knowledge and skills (talents). Moreover, they offer profound theoretical insights into the developmental process, through which early, innate abilities are transformed into adult forms of talent. The developmental process is facilitated by two categories of catalysts: intrapersonal catalysts such as physical or mental traits and processes of self- or goal-management, and environmental catalysts such as other individuals, the environment, or the provision of special training opportunities (Gagné, 2004, 2010).

In the revised DMGT 2.0, Gagné (2010) placed special emphasis on the intrapersonal catalyst motivation. According to the author, motivation is paramount for talent development because the developmental process requires the systematic, effortful, and continuous pursuit of an excellence goal (Gagné, 2010). Such a lengthy and effortful process is more likely to be maintained, and hence, to result in the desired outcomes if an individual is motivated. Since motivation's importance for talent development has also been acknowledged by other researchers (e.g., Rea, 2000), talent management should apply motivation-enhancing practices. It is out of the scope of this article to provide the reader with a review of theories on motivation. However, much is known about how to enhance the motivation of workers from theories such as self-determination theory (Deci & Ryan, 1985), expectancy theory (Vroom, 1964), and goal-setting theory (Locke & Latham, 1990). For more profound reviews on this topic, we refer the reader to the work of Locke and Latham (2004) and Latham and Pinder (2005).

The second catalyst of talent development mentioned in the DMGT (Gagné, 2004, 2010) is the environment or the context in which talent development takes place. Since talent cannot be disconnected from its context (Biswas-Diener et al., 2011) and since a specific context might influence different people in different ways (Papierno et al., 2005), talent management should be dynamic and adaptable to either the context or the individual. More specifically, three courses of action appear advisable. First, generally speaking, talent management should aim to create an organizational context that facilitates talent development and prevents innate talent from being wasted. Talent-management initiatives should target those individuals who promise to benefit the most from them. They can be found through a

thorough talent identification procedure as described earlier. Second, talent-management initiatives must differ across positions, organizational levels, or organizational branches, as different forms of talent might be needed and should hence be developed in different occupational roles. Third, talent management should not only focus on developing talents to their maximum. A vital part of talent management should focus on teaching employees when and when not to rely on their talents and how to dose the use of a talent to make it match the situation (Biswas-Diener et al., 2011; McCall, 2009).

FUTURE RESEARCH

This review, together with the other reviews included in this special issue, represents one of the first attempts to shed light on the definition of talent within talent management. From a theoretical point of view, a necessary next step would be to develop talent-management models or -frameworks that integrate different talent definitions and formulate propositions about their effects on a variety of outcomes (Dries, 2013; Gelens et al., 2013). Much more theoretical work is needed in this regard to build up a sound theoretical basis for the academic field of talent management.

For the purpose of gaining insights into the talent definitions that are currently used by organizations engaged in talent management, discourse analyses should be conducted. They can be used to analyze official organizational policies or statements of talent managers with regard to the inherent perspective on talent. Furthermore, comparative case analyses can be done to compare talent definitions and talent-management systems in different organizations. Cross-cultural or cross-sector comparisons would be of particular interest since perspectives on talent might be influenced by cultural variables and features of for-profit or not-for-profit organizations (Thunnissen et al., 2013b).

An important next step would then be to compare the effects of different talent definitions on outcome variables such as employee satisfaction, engagement and commitment, and individual and organizational performance. To this end, multi-level research designs should be used that allow an investigation of the relationship between talent management as intended on the organizational level, as implemented on the departmental or team-level by line-managers, and as perceived by employees. An investigation of the respective effects on individual- and organizational-level variables should be included.

CONCLUSION

This paper belongs to a special issue on talent management, which pursues the overall aim of creating a sound theoretical basis for this growing research field. Such a theoretical basis is needed because talent management has been criticized for its lack of focus (Lewis & Heckman, 2006) and for being just another management approach that does not offer added value above and beyond the well-established literature on HRM (Iles, Preece, et al., 2010). It

has therefore been put into question whether talent management is a distinct concept that requires scientific investigation or whether one can gain sufficient knowledge about talent management by studying the available literature on HRM and HR development alone. The theoretical papers that have been combined in this special issue make an attempt to legitimate the existence of talent management as an independent research stream.

The present paper contributes to this overall aim by providing an in-depth theoretical review on the nature of talent and by connecting the findings about talent with organizational talent management. It has been shown that there are different ways of defining talent, which, in turn, each entail different consequences for talent-management practices. Defining talent as rather innate goes together with talent-management practices that are mainly directed at talent recruitment, identification, and retention, whereas defining talent as acquired necessitates talent-management practices that are strongly focused on talent development. Finally, when defining talent as the product of nature-nurture interactions, talent identification benefits from the assessment of factors that reflect the ability to learn—and specifically, the ability to learn the things that are important for a job task—whereas talent development can further be enhanced by influencing personal and environmental catalysts.

This paper shows that talent management makes use of several practices that are commonly associated with HRM, and that talent management and HRM are indeed related to one another. The difference between both terms can, however, be explained through the difference in the terms “human resource” and “talent.” The term human resource is rather generic and neither provides us with information about the receiver nor about the content of an HR practice. The term talent, by contrast, can potentially offer us insights about employees who receive certain HR practices and about the specific nature and shape of an HR practice. In other words, talent management can be seen as a scientific discipline that falls under the umbrella term HRM, covering one specific niche of it. Depending on the definition of talent, talent management is directed at certain human resources only, makes use of certain HR practices, and shapes these practices in a prescribed way.

CHAPTER 3

THE INFLUENCE OF UNDERLYING PHILOSOPHIES ON TALENT MANAGEMENT: THEORY, IMPLICATIONS FOR PRACTICE, AND RESEARCH AGENDA

ABSTRACT

In order to explain how and why talent management can contribute to a firm's sustained competitive advantage, we need to gain insights into the philosophies about talent that underpin talent management. This article introduces four talent philosophies that vary in their perception of talent as (a) rare (exclusive) or universal (inclusive), and (b) stable or developable: the exclusive/stable; exclusive/developable; inclusive/stable; and inclusive/developable talent philosophy. We discuss basic assumptions, talent-management practices, opportunities, and challenges for each of the four philosophies. Based on this discussion, testable propositions for future research are developed.

Keywords: HR philosophy, strategic HRM, talent development, talent management, talent philosophy

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INTRODUCTION

Academics and practitioners agree that talent management continues to be one of the key challenges for organizations worldwide because it can represent a source of sustained competitive advantage in the highly dynamic and volatile market environment of the 21st century (Collings & Mellahi, 2009; Farndale, Scullion, & Sparrow, 2010; PricewaterhouseCoopers, 2012; Schuler, Jackson, & Tarique, 2011). Building on other existing definitions (e.g., Blass, 2007; Tarique & Schuler, 2010), we refer to talent management as the systematic utilization of human resource management (HRM) activities to attract, identify, develop, and retain individuals who are considered to be 'talented' (in practice, this often means the high-potential employees, the strategically important employees, or employees in key positions). Notwithstanding its importance, many organizations struggle to develop and implement effective talent-management programs or practices (Vaiman et al., 2012). On that account, scholars have started to look into the factors that impede the effective management of (global) talent. Factors that have been identified as challenges so far include a general shortage of talent—in particular, of international management talent—; the fierce global competition for talent; and an insufficient talent supply for businesses in emerging markets such as India and China (Farndale et al., 2010; Kim & McLean, 2012; Mellahi & Collings, 2010; Tarique & Schuler, 2010). We argue, however, that the outcomes of talent management hinge on yet another factor that has been overlooked so far: the underlying talent philosophy defined as the fundamental assumptions and beliefs about the nature, value, and instrumentality of talent that are held by a firm's key decision-makers.

Literature on strategic human resource management (SHRM) has long ago identified underlying philosophies about the nature of human resources (HR) as key determinants of the specific shape of HR practices (Becker & Gerhart, 1996). The way in which human resource practices are shaped, in turn, is a more influential determinant of HR effectiveness than the presence of such practices alone (e.g., Boxall, 2012; Boxall & Macky, 2009). Consequently, given the close connection between talent management and HRM (Collings & Mellahi, 2009), we argue that talent philosophies are an essential, yet so far overlooked factor that impacts the effectiveness of talent management in practice.

Moreover, examining different talent philosophies is necessary because the research field is marked by tensions regarding the nature of talent (Dries, 2013). The most salient tension concerns the exclusiveness or inclusiveness of talent management. Whereas some scholars believe that only few employees are talented (Becker et al., 2009), others propose that every employee has specific talents that can be productively applied in organizations (e.g., Buckingham & Vosburgh, 2001). A second distinct discussion point refers to the question of whether talent is a stable and enduring trait (Peterson & Seligman, 2004), or a mere potential that can (or even: has to) be developed (Cohn et al., 2005). Combining these two tensions

results in four distinct talent philosophies: exclusive and stable; exclusive and developable; inclusive and stable; inclusive and developable.

In the following, this article will thoroughly elucidate the four philosophies that have just been instanced and will derive testable propositions for future research. It thereby represents a valuable contribution to theory on talent management because it is among the first to systematically compare different philosophies about talented employees and their respective effects. Moreover, this article can provide important ideas and insights to practitioners who are planning to implement or shift the focus of a talent-management system.

HR PHILOSOPHIES

HR philosophies have been defined as general statements "of how the organization regards its human resources, what role the resources play in the overall success of the business, and how they are to be treated and managed" (Schuler, 1992, p. 21). As such, HR philosophies are closely related to organizational values (Schuler, 1992) and HR principles (Arthur & Boyles, 2007). Lately, HR philosophies have been discussed within the context of SHRM, particularly within literature on high performance work systems, bundles of HR practices, or high-involvement work systems (e.g., Arthur, 1994; Guest et al., 2004; Huselid, 1995; MacDuffie, 1995). Although it has been hypothesized that such (systems of) HR practices have beneficial effects on performance, empirical studies have reported inconsistent findings regarding this link (Boselie, Dietz, & Boon, 2005; Combs, Liu, Hall, & Ketchen, 2006). The inconsistent findings have been explained by a lack of common methodology and theory (Paauwe, 2009; Wright & Gardner, 2003). There is neither agreement on the 'best' HR practices that lead to high performance, nor on the practices that should be combined into a system or bundle of practices (Becker & Gerhart, 1996; Boxall & Macky, 2009; Paauwe & Boselie, 2005; Wright & Gardner, 2003). Furthermore, there is neither consensus on the way in which an HR practice should be designed and implemented, nor on the mechanisms or processes through which HR practices influence performance (Boxall, 2012; Boxall & Macky, 2009).

Several scholars have discussed reasons for these ambiguities regarding HR practices or systems of HR practices. It has, for instance, been argued that the same HR practice can be implemented in many different ways, and that its effects will vary depending on the way in which it is designed by managers and perceived by employees (Boxall, 2012; Boxall & Macky, 2009; Nishii et al., 2008). The specific design of an HR practice or a system of practices is heavily influenced by what Paauwe (2004) called the 'dominant coalition'. The dominant coalition comprises key organizational decision makers (supervisory board; top, middle, and lower management; HR management; etc.) who shape HR practices based on their beliefs, attitudes, values, and norms (Paauwe, 2004), or, in other words, based on their inherent philosophies (Boxall, 2012; Boxall & Macky, 2009). For example, managers who hold the

philosophy that employees seek responsibility and can autonomously direct their actions towards reaching a goal (cf. Theory Y; McGregor, 1960) will design a different reward- and control system than managers who believe that employees will only work towards reaching a goal if they are closely supervised and controlled (cf. Theory X; McGregor, 1960; see also O'Reilly & Pfeffer, 2000). Managers' inherent philosophies even influence the effects of HR practices to such an extent that different practices or combinations of practices that are based on the same underlying philosophy can achieve the same effects (Arthur & Boyles, 2007; Becker & Gerhart, 1996). This equifinality phenomenon might partly be explained by the assumption that managerial philosophies influence the way in which employees perceive, interpret, and react to HR practices. These employee perceptions and reactions, in turn, appear to be crucial determinants of the overall effects of HRM (Boxall, 2012; Nishii et al., 2008; Purcell & Hutchinson, 2007).

Based on the discussion presented it has been reasoned that the focus of research on SHRM should be moved away from examining single practices (Boxall, 2012). Instead, research should concentrate on higher-order constructs such as HR philosophies that shape the design of HR practices or systems of practices (Arthur & Boyles, 2007; Becker & Gerhart, 1996; Boxall, 2012; Lepak, Taylor, Tekleab, Marrone, & Cohen, 2007; Wright & Gardner, 2003). Even though the importance of underlying HR principles or philosophies for SHRM has been acknowledged by several scholars, empirical and theoretical work on this topic is still scarce (Lepak et al., 2007; Monks et al., in press).

Moreover, to the best of our knowledge, philosophies have not yet received any scholarly attention within the context of research on talent management. We argue, however, that current discussions about the influence of HR philosophies on the effectiveness of HRM (Boxall, 2012) also apply to talent management because there is some conceptual overlap between the concepts talent management and HRM. The exact extent of this overlap is currently being discussed. While some scholars argue that talent management is essentially the same as HRM (Iles, Preece, et al., 2010), others argue that talent management differs from HRM in that it adheres to the requirements of a 'decision science' where investments are made in the areas that generate the biggest profits (Boudreau & Ramstad, 2007; Collings & Mellahi, 2009). In other words, whereas HRM is about managing the whole workforce, talent management focuses only on the employees who are considered to be talented. As organizations tend to differ in how many employees they consider to be talented, and as these differences can mainly be explained by their assumptions about the nature of talent (i.e., their talent philosophies), we reason that talent philosophies will also influence the discussion about the similarities or differences between HRM and talent management.

TALENT MANAGEMENT AND TALENT PHILOSOPHIES

Recently, the knowledge base on talent management has grown due to some valuable theoretical contributions, such as several reviews on (strategic) talent management (Collings & Mellahi, 2009; Iles, Preece, et al., 2010; Lewis & Heckman, 2006), a special issue on global talent management in *Journal of World Business* (Scullion, Collings, & Caligiuri, 2010), and a special issue on talent-management theory in *Human Resource Management Review* (Dries, 2013). Nonetheless, ambiguities regarding definitions, theoretical frameworks, and empirically based recommendations for the use of talent management in practice persist (Collings & Mellahi, 2009; Lewis & Heckman, 2006). These ambiguities can often be traced back to dissimilar interpretations of the term talent: what is talent or who do we consider to be talented? These interpretations, in turn, are interrelated with fundamental assumptions and beliefs about the nature, value, and instrumentality of talent or, in short, talent philosophies. Recently, Dries (2013) has identified five tensions about the nature of talent that mark talent-management theory and practice. She addresses, amongst others, the questions of whether talent is an inclusive or exclusive concept and whether talent is innate or open to development. While we acknowledge that these two questions are not the only existing tensions about the nature of talent that possibly influence talent philosophies, we chose to focus on them due to their saliency and far-reaching consequences for talent-management practice.

With regard to the first tension, several scholars proposed that talent management can either have an exclusive or inclusive focus (Iles, Preece, et al., 2010; Lewis & Heckman, 2006; Stahl et al., 2012). Is talent considered being rare, or does everyone possess talent? While many scholars advocate exclusive talent-management approaches that are directed at a small, elitist percentage of the workforce only—the A players, high potentials, high performers, or strategically important employees—(Boudreau & Ramstad, 2005; Collings & Mellahi, 2009), others favor inclusive talent-management approaches that are directed at the whole workforce (Buckingham & Vosburgh, 2001; Yost & Chang, 2009). In practice, the majority of organizations adopt exclusive approaches to talent management (Swailes, 2013), but recent research by the Chartered Institute of Personnel and Development (CIPD, 2012) shows that inclusive approaches are also fairly common. Whereas three fifths of organization reported having exclusive talent-management approaches, two fifths had inclusive approaches (CIPD, 2012). In addition, hybrid approaches that combine inclusive and exclusive philosophies are possible (Stahl et al., 2012).

The second tension relates to the argument that talent-management practice is influenced by the extent to which talent is understood as an innate or acquired construct (Meyers, van Woerkom, & Dries, 2013). Is talent a stable entity, or can it be developed? Talent understood as a stable entity would lead to talent-management practices with a strong emphasis on talent identification and selection, whereas the assumption of acquired talent would

necessitate practices that aim at development and gaining experiences (Meyers, van Woerkom, & Dries, 2013). The ongoing discussion about the extent to which talent is stable (e.g., Howe et al., 1998; Meyers, van Woerkom, & Dries, 2013) relates to several other factors. On the one hand, people who define talent as a set of knowledge, skills, and abilities are more likely to think that it can be acquired than people who define talent in terms of personality characteristics, cognitive abilities, or motivation (Silzer & Church, 2009a). On the other hand, the question relates to the implicit person theory an individual holds (Dries, 2013), meaning either the belief that persons can be formed and molded by experiences (i.e., incremental theory), or the belief that people only rarely change (i.e., entity theory; Dweck, 2012). Moreover, a discussion of this point is relevant with regard to talent management in different cultural contexts. In many western cultures, talent is commonly understood as an innate ability that leads to above-average performance in a specific domain (Tansley, 2011). In Japan, by contrast, talent denotes outstanding accomplishments that result from many years of training (Tansley, 2011).

Combining the two tensions discussed above leads to four distinct talent philosophies: exclusive/stable; exclusive/developable; inclusive/stable; and inclusive/developable (see Figure 1). We will discuss these four philosophies in the following paragraphs, and derive falsifiable propositions that can be tested in future research.

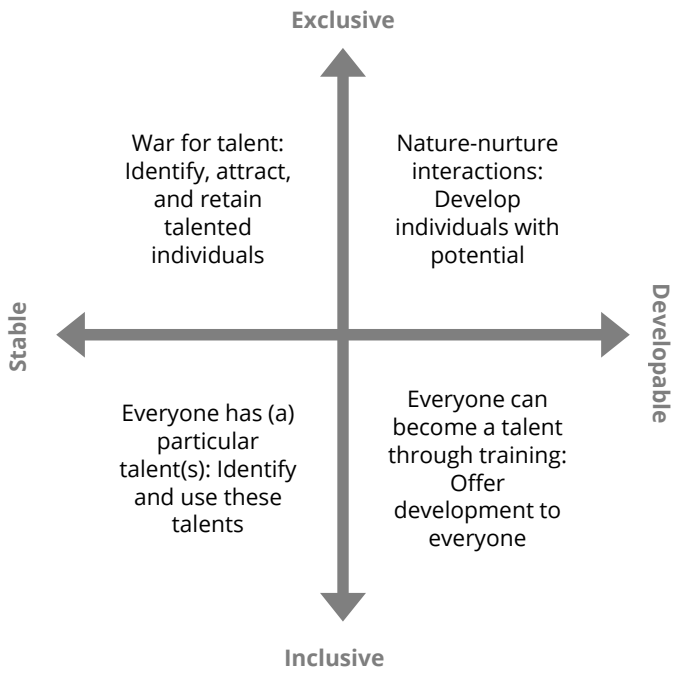

Figure 1. **Talent philosophies**

THE EXCLUSIVE/STABLE TALENT PHILOSOPHY

Dictionaries define talent as “a natural ability to be good at something, especially without being taught” ("Talent," n.d.b). Similar to this definition, lay people commonly understand talent as a scarce and genetically determined construct. Moreover, the assumption of innate talent is prevailing in the business context (Burkus & Osula, 2011). This assumption forms the basis of the exclusive/stable talent philosophy. This philosophy implies that the working population can invariably be divided into two groups: a small group of people ‘with talent’ (the A players, top performers, or star employees) and a much bigger group of people ‘without talent’ (the B and C players, or average and bottom performers; e.g., Axelrod et al., 2002). Opinions of the prevalence of talent in the working population differ, but, typically, no more than 20 percent of the workforce is identified as A player (Welch & Welch, 2005). A players are often thought of as people with a particular combination of intelligence, personality, and motivation (DeLong & Vijayaraghavan, 2003). Consequently, as both intelligence and personality are understood as stable characteristics, the differentiation between A, B, and C players is seen as mainly irrevocable, meaning that employees either ‘have’ talent or ‘do not have it’. Especially the prevalence of stable individual differences in intelligence (Herrnstein & Murray, 1994), and the strong predictive value of intelligence for future job performance (Schmidt & Hunter, 1998) are seen as key arguments by proponents of an exclusive/stable talent philosophy.

Effect of an Exclusive/Stable Talent Philosophy on Talent-Management Practices

Proponents of the exclusive/stable philosophy argue that organizations that win the ‘war for talent’—meaning organizations that have more people ‘with talent’ than their competitors—will gain a sustainable competitive advantage (Michaels et al., 2001; Snell et al., 1996). This argument is deeply rooted in literature on the resource-based view of the firm (RBV; Barney, 1991), according to which valuable, rare, inimitable, and non-substitutable resources like employee talents can help to outperform competitors. Building forth on this idea, several scholars in the field of SHRM proposed that organizations should use different HR or talent-management practices for different groups of employees (Becker & Huselid, 2006; Boudreau & Ramstad, 2005; Lepak & Snell, 1999). This idea of workforce differentiation implies a preferential treatment of talented employees; in other words, employees who (a) perform well (e.g., the A players; Michaels et al., 2001), (b) are both unique and valuable (Lepak & Snell, 1999), and/or (c) occupy positions that create substantial contributions to a firm’s strategic success (Becker & Huselid, 2006; Boudreau & Ramstad, 2005). For example, Seleim, Ashour, and Bontis (2007) made the case for star and superstar software developers as a key resource for software companies. These software developers perform two to four times better than other developers, are on short supply on the labor market, and are central to the organizations’ strategic business process. The authors therefore advise software companies to carefully select the best and the brightest candidates, and to emphasize the attraction and

retention of these talented employees as central tasks for talent management (Seleim et al., 2007). This advice is in line with more general suggestions by advocates of workforce differentiation, according to which disproportional amounts of resources should be invested in order to attract, select, and retain talented employees who (will) occupy key organizational positions (Becker & Huselid, 2006; Becker et al., 2009).

Several scholars have given more specific advice as to the nature of these investments. First, Vaiman et al. (2012) highlighted the decisive role of employer branding, which comprises all efforts to promote an organization's reputation as a good and desirable employer (Backhaus & Tikoo, 2004), for the attraction and retention of employees. Especially employees from Generation Y—who entered the labor market since the turn of the century and who are often targeted by talent-management initiatives—, make increasing demands on their (future) employer: they prefer, for instance, to work for employers that have the reputation to act in a socially responsible way (Vaiman et al., 2012). Second, talent identification or selection has been identified as crucial for ensuring that the 'right' people will be placed in strategically important positions (McDonnell, 2011). Commonly, organizations rely on a variety of indicators such as tests of general mental ability, structured or unstructured interviews, education or academic records, work experience, extracurricular activities or interests, and work samples to find talent amongst external job applicants (Schmidt & Hunter, 1998). In the context of internal talent identification, organizations often rely on performance appraisals as main criterion (Dries & Pepermans, 2008). One particular example are forced ranking approaches, in which the best performing 20 percent of employees are characterized as A players, the following 70 percent as B players, and the lowest performing 10 percent as C players (Grote, 2005; Welch & Welch, 2005). Third, Lepak and Snell (1999) propose that organizations should use HR practices that aim at fostering commitment of talented (highly unique and valuable) employees and at creating stable, organization-focused employment relationships. This implies long-term involvement of and investment in talented employees by means of, for instance, offering participation in decision making, career development, and mentoring programs (Lepak & Snell, 1999). Based on the discussion presented above, the following propositions have been derived.

> *Proposition 1a:* An exclusive/stable talent philosophy is positively related to a differentiated management of talented and other employees (workforce differentiation based on innate talent).
>
> *Proposition 1b:* An exclusive/stable talent philosophy is positively related to talent-management practices with regard to the attraction, selection, and retention of a small subgroup of talented employees.

Opportunities and Challenges

Scholars and practitioners who support an exclusive/stable talent philosophy expect that talent management creates several benefits for an organization. On the one hand, they assume that organizations can establish and sustain a leading market position by staffing the firm with the best, most intelligent, and/or most motivated employees (Michaels et al., 2001). On the other hand, the principle of workforce differentiation and a differentiated allocation of resources creates several opportunities for organizations (Gelens et al., 2013). For instance, after identifying key performers or key strategic positions, organizations can maximize profits through a more strategic allocation of resources. In other words, they can invest disproportionally in employees or positions that promise to yield disproportionate returns (Becker et al., 2009). Investing in talented employees enhances their motivation and commitment to the organization, and these, in turn, are key mediators in the relationship between talent management and organizational outcomes (Collings & Mellahi, 2009). Moreover, investing in valuable and difficult to replace employees will reduce the likelihood that these employees leave the firm, thereby minimizing replacement costs (Lepak & Snell, 1999).

The exclusive/stable talent philosophy and particularly the differentiated treatment of employee groups also poses some challenges. First, the practice of classifying individuals as talented and untalented based on the assessment of, for instance, performance or intelligence has been criticized. The use of performance appraisals is considered as disputable because performance often reflects experience with the task at hand, but not talent (e.g., Silzer & Church, 2009a; Yost & Chang, 2009). More importantly, the utility of intelligence assessments has been challenged because, amongst others, a given test score may not capture all aspects of mental ability. In addition, test scores may be biased due to cultural influences such as the familiarity with test materials and different conceptualizations of intelligence, adaptability, or appropriateness (Neisser et al., 1996). Moreover, it has been argued that the prevailing assumption that inherited factors—like intelligence—cannot be altered is wrong (Neisser et al., 1996). They are still subject to environmental influences and may depend on learning (Neisser et al., 1996).

Another challenge faced by proponents of an inclusive/stable philosophy comprises the increasing scarcity of talented employees in the global labor market, leading to a fierce global competition for talent (Farndale et al., 2010; Kim & McLean, 2012; Mellahi & Collings, 2010; Tarique & Schuler, 2010). Accordingly, the attraction of talented employees—in particular, the attraction of management talent for subsidiaries in emerging markets such as India and China (Farndale et al., 2010)—gets more and more difficult and costly for organizations.

Finally, critiques argue that literature on workforce differentiation is biased in that it only focuses on its favorable effects on talented employees while neglecting possible negative effects on employees that are considered neither talented nor valuable (Becker & Huselid,

2006; Marescaux, De Winne, & Sels, 2013; Walker & LaRocco, 2002). Clearly communicating that some employees do not belong to the organization's talented group might impair their motivation (McDonnell, 2011). The negative effects on these employees might attenuate or even outweigh the positive effects of workforce differentiation on talented employees (Becker & Huselid, 2006; Marescaux et al., 2013). In particular, losing solidly performing B players who form the backbone of a business can diminish an organization's efficiency and effectiveness (DeLong & Vijayaraghavan, 2003).

> *Proposition 1c:* An exclusive/stable talent philosophy provides the following opportunities to organizations: gaining competitive advantage through people, high returns on investment in employees though an optimal allocation of resources, and the retention of a small subgroup of talented employees.
>
> *Proposition 1d:* An exclusive/stable talent philosophy brings about the following challenges with regard to talent management: selecting talent, dealing with the scarcity of talent, and managing the employees who are not talented.

THE EXCLUSIVE/DEVELOPABLE TALENT PHILOSOPHY

The exclusive/developable talent philosophy can be summarized by a quote by Csikszentmihalyi (1998) stating that "talent is not an all-or-nothing gift but a potential that needs to be cultivated to bear fruit" (p. 411). Building on this quote, certain ideas of the exclusive/developable philosophy can be elucidated. First, talent is conceptualized as a potential implying that talent represents "the possibility that individuals can become something more than what they currently are" (Silzer & Church, 2009a, p. 379). Accordingly, talent is latent: something that is not yet there, but makes certain promises for the future (Altman, 1997; Silzer & Church, 2009a). Second, the quote implies that a distinction is made between, on the one hand, talent as a latent potential and, on the other hand, realized potential that becomes manifest in superior performance (cf. Gagné, 2004). In other words, potential will only bear fruits if it is developed. A third main idea of the exclusive/developable philosophy, which is not directly addressed in the quote by Csikszentmihalyi (1998), concerns the presumably rare occurrence of talent or potential: the philosophy assumes that few individuals show great promise for becoming highly performing employees in the future whereas the majority of employees do not. Commonly, around 10 to 15 percent of an organization's employees are identified as high-potentials (Ulrich & Smallwood, 2012).

In summary, the exclusive/developable talent philosophy is similar to the exclusive/stable philosophy in that both approaches consider talent to be rare and at least partly innate. However, in contrast to the latter, the exclusive/developable philosophy assumes that talents are often latent and can only be unveiled through development.

Effect of an Exclusive/Developable Talent Philosophy on Talent-Management Practices

Scholars who see talent as a scarce but partly acquired resource highlight two main tasks for talent management: the accurate identification of employees with potential (Church & Waclawski, 2009) and the development of these high potential employees (Silzer & Church, 2010). In a study amongst several big US corporations, Derr, Jones, and Toomey (1988) found that many organizations use a three stage process of high potential management. In the first stage, employees with high potential are identified (separation stage), typically early in their careers. The high potential employees subsequently undergo a lengthy period in which they are given special assignments and extensive formal and on-the-job training (transition stage) before they are able to take on their destined senior organizational roles (incorporation stage). Following an exclusive/developable talent philosophy therefore means that the workforce will be segmented according to the potential an individual shows. Only employees who show potential will get access to specialized training and development opportunities.

Silzer and Church (2009) developed a three-dimensional model of potential that specifies how potential can be assessed. The first dimension of potential comprises stable cognitive and personality factors, such as general cognitive abilities, conceptual or strategic thinking, dealing with complexity, sociability, dominance, emotional stability, and resilience (foundational dimension). These factors are hypothesized to be indispensable for a broad range of future organizational roles and positions (Silzer & Church, 2009a). The second dimension includes factors that determine the future growth and development of employees, for instance, adaptability, learning orientation, and career ambition (growth dimension; Silzer & Church, 2009a). Factors in this dimension are also rather stable, but can vary in strength depending on the situation. The third dimension includes early indicators of skills (e.g., leadership skills, research skills) that can be further developed into end-state skills needed for specific career paths (career dimension; Silzer & Church, 2009a). Silzer and Church (2009) propose to generically assess the factors of the foundational and growth dimension for identifying potential, because they are required for almost any higher organizational role.

After identifying employees with sufficient potential in these dimensions, training and development can be used to enhance an individual's career-specific skills (Silzer & Church, 2009a). The necessity to tailor training and development trajectories to early indicators of career-specific potential has been highlighted by theories on person-environment interactions. These theories propose that an optimal fit between initial conditions (individual potential) and stimulating environmental factors (training) results in a chain of synergistic or multiplicative person-environment interactions that lead to disproportionate gains in a given skill or ability (Papierno et al., 2005; Schmitt et al., 2003). This means that individuals can show remarkable improvements of abilities after participating in a training that is matched to their potential (Papierno et al., 2005).

Proposition 2a: An exclusive/developable talent philosophy is positively related to a differentiated management of talented and other employees (workforce differentiation based on potential).

Proposition 2b: An exclusive/developable talent philosophy is positively related to talent-management practices with regard to the selection and, most importantly, the development of the small subgroup of employees with potential.

Opportunities and Challenges

When organizations design talent-management systems in line with the exclusive/developable philosophy, they expect to generate greater returns on training investments by offering development opportunities to employees with potential only. The idea is that if training is tailored to the initial abilities (potential) of promising employees, they will display a much steeper growth rate in their abilities than employees who do not display this initial potential (Papierno et al., 2005). This assumption has been challenged by scholars who argue that the mere designation as 'high potential' causes individuals to perform better regardless of whether they are true high-potentials or not (cf. literature on the Pygmalion effect; Burkus & Osula, 2011; Rosenthal, 2010).

As potential is latent by definition, finding the 'true' high potential employees presents another challenge to organizations. Silzer and Church (2009a) indicate that their three-dimensional model of potential can serve as a sound basis for potential identification, but does not provide answers to all questions. It is, for instance, still unclear whether there is an optimal combination of potential in the foundational, growth, and career dimension, and how this optimal combination varies by function, industry sector, gender, or ethnicity (Silzer & Church, 2009a). Moreover, the authors argue that potential identification is impeded by the fact that today's organizations operate in very dynamic markets so that they do not know which form of potential or talent will be needed in the future (Silzer & Church, 2009a). Based on this argument, several authors have stressed that factors predicting future learning —or factors of the growth dimension— such as adaptability, flexibility, learning orientation, learning agility, feedback seeking, and drive are crucial components of potential (Eichinger & Lombardo, 2004; Silzer & Church, 2009a; Spreitzer et al., 1997). The growth dimension is, however, the most difficult dimension to assess (Silzer & Church, 2009a). On a related note, the difficulty to identify employee potential also implies that it often remains undiscovered. Consequently, its development will not be facilitated leading to unrealized or wasted potential (Gladwell, 2008; Papierno et al., 2005).

In the light of the idea that potential often remains unrealized and therefore latent, one might argue that more people than commonly presumed possess talent (Gladwell, 2008). This reasoning is crucial when it comes to dealing with the general shortage of talented employees (cf., Farndale et al., 2010). It implies that employees with scarce talents cannot

only be bought in from the market (as an exclusive/stable philosophy might suggest), but also be grown inside the organization as long as the organization succeeds in detecting relevant potential. Furthermore, training and development practices can be used to transfer potential from one career domain to another. The idea of talent transfer originated from research in the area of top sport: researchers found that athletes in a given sport A can be trained to become successful in another sport B on condition that the two sports require similar basic characteristics or abilities (Bullock et al., 2009). Examples of successful talent transfer include athletes who switched from speed skating to cycling, from gymnastics to diving, or from sprinting to bobsled (Gulbin, 2008). The stable/developable talent philosophy endorses the underlying assumptions of talent transfer in the area of sport in that it assumes that potential can be developed towards different ends. In other words, employee potential might be applied in several career domains as long as certain prerequisites are met (e.g., sufficient potential in the foundational and growth dimensions; Silzer & Church, 2009a). This means that employees in one occupational position can be trained for another occupational position in a limited amount of time and with limited required effort if these employees meet the basic prerequisites for the destined position. For example, Rappaport, Bancroft, and Okum (2003) reasoned that an elderly aircraft technician can easily be re-trained for a position as radiation technician in a hospital because he already possesses many relevant skills and abilities. Taking the possibility of talent transfer into account allows organizations to recruit from a very wide pool of job applicants, as they do not have to limit their search to applicants who occupied similar positions in the past (Rappaport et al., 2003). Moreover, they might be able to tab more uncommon labor pools including older workers, women, and ethnic minorities (Rappaport et al., 2003), which is a valuable strategy to deal with the lasting shortage of talented employees and the ageing working population (Rappaport et al., 2003).

> *Proposition 2c:* An exclusive/developable talent philosophy provides the following opportunities to organizations: optimizing the return on training investments, transferring talent from one domain to another, using broad recruitment strategies, and tapping of uncommon labor pools.
>
> *Proposition 2d:* An exclusive/developable talent philosophy brings about the following challenge with regard to talent management: validly identifying potential.

THE INCLUSIVE/STABLE TALENT PHILOSOPHY

The inclusive/stable talent philosophy assumes that employee and organizational flourishing can best be achieved by focusing on the positive qualities or the talents residing in every individual (Peterson & Park, 2006). In contrast to the two exclusive philosophies, talent is thus seen as universal, meaning that everyone possesses certain positive traits (Peterson & Seligman, 2004; Seligman & Csikszentmihalyi, 2000). In addition, talent in itself is defined in very broad terms. Whereas exclusive philosophies often confine the talent definition to

leadership talent or other specific forms, inclusive philosophies consider various forms of talent even if they might seem atypical for the work context; for instance, the ability to make people laugh or the ability to be grateful for good things (Peterson & Seligman, 2004).

The inclusive/stable philosophy is rooted in positive psychology defined as "the science of positive subjective experience, positive individual traits, and positive institutions" (Seligman & Csikszentmihalyi, 2000, p. 5). Scholars in this field have been building up a body of literature on positive individual traits, in particular, individual (character) strengths, throughout the last 15 years (e.g., Peterson & Park, 2006; 2011). Based on literature on positive psychology and individual strengths, talents in the context of an exclusive/stable philosophy can be understood as employee attitudes and behaviors that come naturally to them; that drive, motivate and energize them; that they value and like; and that make them feel authentic and true to themselves (Buckingham, 2005; Linley & Harrington, 2006; Peterson & Seligman, 2004). These individual talents are supposed to be mainly enduring and stable — they belong to a person like a blood type —, and can only be slightly refined through, for instance, acquiring new knowledge and skills (Buckingham, 2005; Peterson & Seligman, 2004).

Effect of an Inclusive/Stable Talent Philosophy on Talent-Management Practices

Advocates of the inclusive/stable philosophy advises HR and talent managers to deliberately design talent-management systems that acknowledge the unique qualities of all employees and aim to capitalize on them (Buckingham, 2005; Buckingham & Vosburgh, 2001). In this regard, three key tasks for talent management emerge: identifying individual talents, stimulating the use and refinement of talents, and matching employee talents with positions or tasks. An additional task is to manage around weaknesses.

The importance of the first two tasks of talent management, stimulating the identification and use of talents, has been highlighted by literature on strengths in the context of positive psychology. It has been claimed that many people do not know what their strengths are (Linley, 2008) so that talent management has to take charge of strength or talent identification. Most commonly, talents are identified through the use of questionnaires such as the Strengthsfinder (Rath, 2007), the values in action inventory of strengths (VIA-IS; Peterson & Seligman, 2004), or StandOut (Buckingham, 2011). Furthermore, it has been argued that using strengths is related to a number of positive individual outcomes such as feeling excited, invigorated, happy, and driven (Peterson & Seligman, 2004). Research evidence supports these claims by showing that interventions that help individuals to identify their strengths and stimulate them to use these strengths more or in new ways enhance individual well-being and happiness (e.g., Mitchell, Stanimirovic, Klein, & Vella-Brodrick, 2009; Seligman, Steen, Park, & Peterson, 2005). In addition, there is empirical evidence that employees who perceive that their employer facilitates strengths identification and use show higher levels of in-role and extra-role performance (van Woerkom & Meyers, 2014). In order to ensure that employees have the opportunity to utilize their strengths, another key aspect

of talent management based on the inclusive/stable philosophy is increasing the fit between the natural talents of an employee and his or her job (Buckingham, 2005; Buckingham & Vosburgh, 2001). This key task is meaningful in the light of a current meta-analysis (Van Iddekinge, Roth, Putka, & Lanivich, 2011) showing that job-relevant vocational interests defined as "traits that reflect preferences for certain types of work activities and environments" (p. 1167) are strong predictors of job performance. Since the conceptualization of inclusive/stable talents partly overlaps with this definition of vocational interests, one might expect that placing employees in positions that allow them to play to their strengths enhances individual performance.

Critiques claimed that a one-sided focus on strengths can turn them into weaknesses (Kaiser & Overfield, 2011). Strengths researchers, however, argued that focusing on strengths does not mean that individual shortcomings are neglected completely (Buckingham, 2005; Linley & Harrington, 2006). Talent management following the inclusive/stable philosophy also comprises training employees who perform poorly on critical tasks (Buckingham, 2005; Linley & Harrington, 2006). Besides, talent management tries to manage around weaknesses by partnering employees with complementary strength profiles, which allows one partner to take over those tasks that belong to the weaknesses of the other partner, putting together work teams with a diverse strengths profile, or making additional changes to task design (Buckingham, 2005; Linley & Harrington, 2006).

> *Proposition 3a:* An inclusive/stable talent philosophy is positively related to talent management-practices with regard to the identification of individual strengths (throughout the whole workforce), using strengths, increasing the person-job fit, and managing around weaknesses.

Opportunities and Challenges

Employees who experience a talent-management system that is based on the inclusive/stable philosophy are likely to feel supported and valued by their organization, because they work in a surrounding that is generally appreciative of their talents. Consequently, employees make positive attributions regarding the goals of talent management (Nishii et al., 2008). This might mean, for instance, that employees presume that talent management is meant to enhance their well-being (Nishii et al., 2008). When employees perceive talent or HR management as an indicator of their organization's concern for their well-being, they respond with higher organizational commitment (Nishii et al., 2008). The inclusive/stable talent philosophy can therefore be seen as especially conducive to employee retention. In addition, organizations might also have fewer difficulties to attract employees because employees want to work for organizations where they can utilize their talents (O'Reilly & Pfeffer, 2000).

Another opportunity that the inclusive/stable philosophy entails is based on the idea that using talents is a source of happiness, energy, and motivation (Buckingham, 2005; Peterson & Seligman, 2004). As a result, employees will be motivated to do their work well; will be less prone to exhaustion and, eventually, to burnout; and will also show enhanced performance according to the happy-productive worker thesis (Cropanzano & Wright, 2001; Staw, 1986). In addition, capitalizing on unique strengths might have positive consequences for teamwork and especially team cohesiveness. When the tasks in a team are allocated in such a way that all team members perform the tasks that play to their strengths, greater inter-dependency is created (Buckingham, 2005). As a consequence, team members learn to appreciate their direct colleagues for their unique capabilities and their contributions to the team output (Buckingham, 2005).

Critiques also highlighted some challenges for talent management based on the inclusive/stable philosophy. They argue that talent management that emphasizes stable employee strengths runs the risk of fostering a strong fixed mindset among the workforce (Biswas-Diener, Kashdan, & Minhas, 2011). In a fixed mindset, individuals believe that core talents are predetermined by nature and cannot be altered (Dweck, 2006, 2012). When employees fail, they will thus tend to attribute their failure to a lack of innate characteristics, which eventually leads to employees who are easily discouraged and avoid facing challenges (Dweck, 2012). In addition, a fixed mindset is related to low levels of resilience in the face of obstacles (Dweck, 2012; Yost & Chang, 2009).

Moreover, notwithstanding the assumed favorable overall attraction and retention rates of employees under an inclusive/stable philosophy (O'Reilly & Pfeffer, 2000), the question of whether the '*right*' employees are attracted and retained still needs to be answered. Even though the inclusive/stable philosophy does not differentiate between more and less valuable employees per se, there are always some employees who are indispensable to an organization due to, for instance, the tacit organizational knowledge they have accumulated. Furthermore, many organizations have to deal with a scarcity of workers with particularly rare skills and technical knowledge. There are, for instance, global shortages of health care workers (Kirby & Siplon, 2012), skilled trade workers, and engineers (ManpowerGroup, 2012). Consequently, organizations will compete fiercely to attract these scarce workers, and the workers might be tempted to choose for an organization with an exclusive talent philosophy where they are treated as someone special.

> *Proposition 3b:* An inclusive/stable talent philosophy provides the following opportunities to organizations: creating positive employee attributions with regard to the goals of talent management and increasing employee well-being, motivation, commitment, and eventually performance.
>
> *Proposition 3c:* An inclusive/stable talent philosophy brings about the following challenges with regard to talent management: preventing the development of fixed

mindsets and ensuring that the right employees (e.g., employees with rare knowledge and skills) are attracted and retained.

THE INCLUSIVE/DEVELOPABLE TALENT PHILOSOPHY

At the very heart of the inclusive/developable talent philosophy lays the ambition to develop ordinary employees into extraordinary performers. This ambition is on the one hand related to a pronounced growth mindset (Dweck, 2006, 2012). In a growth mindset, individuals believe that all people have a "great capacity to adapt, change, and grow" (Dweck, 2012, p. 614). On the other, it builds on the fundamental assumption that individuals not only have the capacity but also the inner need to grow and fulfill themselves (i.e., need for self-actualization; Maslow, 1954). Within the inclusive/developable philosophy two approaches can be discerned. The first approach understands talents as individual "potentials for excellence that can be cultivated through enhanced awareness, accessibility, and effort" (Biswas-Diener et al., 2011, p. 106). This means that everyone has the potential to become excellent in a specific domain depending on his or her specific potential or strengths constellation (Biswas-Diener et al., 2011; Yost & Chang, 2009). It does, however, not mean that everyone possesses the potential to become, for instance, an excellent leader (Yost & Chang, 2009). In contrast to this, the second approach within this philosophy assumes that everyone can become excellent in almost any domain (Colvin, 2010; Ericsson et al., 2009). This implies that "experts are always made, not born" (Ericsson et al., 2007, p. 116). In particular, it has been argued that not a single innate factor —except for height and body size in sports— limits the maximum performance that an individual can achieve (Ericsson et al., 2007). Instead, the maximum performance of an individual heavily depends on the accumulative learning opportunities he or she had (Gladwell, 2008).

Effect of an Inclusive/Developable Talent Philosophy on Talent-Management Practices

Talent management that is based on the inclusive/developable philosophy "aspires to yield enhanced performance among all levels in the workforce, thus allowing everyone to reach his/her potential, no matter what that might be" (Ashton & Morton, 2005, p. 30). This form of talent management naturally puts a strong focus on the development of all employees, and encourages employees to self-manage their personal growth. Proponents of the inclusive/developable philosophy therefore advise organizations to clearly communicate this philosophy to line managers and employees in order to create a growth mindset among the workforce and an organizational culture for development (Biswas-Diener et al., 2011; Yost & Chang, 2009). It has been argued that a culture for development is crucial for actual employee development because it provides guidelines and norms regarding desired behaviors (Ruvolo, Peterson, & LeBoeuf, 2004), and can therefore be a critical factor that stimulates employees to develop themselves.

Employee development under an inclusive/developable talent philosophy can have several forms. The first form is relevant when assuming that the achievement of excellent performance is partly dependant on an individual's inherent potentials or strengths constellations (Biswas-Diener et al., 2011; Yost & Chang, 2009). Yost and Chang (2009) argue that, firstly, individuals have to be placed in adequate positions that allow them to deploy and expand their potential. Once individuals occupy a suitable position, HR and talent managers can stimulate employees to develop themselves by making use of stretch assignments, mentoring, networking, individual development plans, feedback, and reflection (Yost & Chang, 2009). Moreover, other researchers have argued that talent development initiatives need to teach employees how to use their given strengths wisely (Biswas-Diener et al., 2011). This implies that they (a) understand the strengths they own and how they interact with one another, (b) are aware of contextual factors that render the use of a certain strength appropriate or inappropriate, and (c) are able to regulate the use of their strengths (in terms of frequency and intensity) to make them fit the situation (Biswas-Diener et al., 2011). This form of strengths development is necessary because it is not always beneficial to use strengths to a greater extent, as is commonly presumed; instead, critiques have claimed that overusing certain strengths can be harmful (Kaiser & Overfield, 2011; Schwartz & Sharpe, 2006). For instance, leaders scoring high on assertiveness commonly receive favorable ratings by their employees. If used excessively, however, leader assertiveness can lead to the demoralization of employees and performance drops (Ames & Flynn, 2007; Kaiser & Overfield, 2011).

The second form of talent development builds on the idea that everyone can become a top performer in any domain through adequate training (Colvin, 2010; Ericsson et al., 2009; Ericsson et al., 2007). Anders Ericsson and his colleagues have repeatedly argued that performance on a task increases as a function of the amount of time invested in deliberate practice (e.g., Ericsson et al., 1993). Deliberate practice is an effortful learning activity that allows for trial-and-error learning and repeated execution of the exact same task; provides individuals with immediate, high-quality feedback about their performance on the task; and aims at improving the performance at tasks that are just beyond the reach of an individual's current state of knowledge, skills, and abilities (Day, 2010; de Bruin et al., 2008; Ericsson et al., 2009). Supportive evidence for the effectiveness of deliberate practice was found in studies showing that the sheer amount of practice accounts for the achievements of, for instance, musicians (Ericsson et al., 1993; Sloboda et al., 1996), soccer and field hockey players (Helsen et al., 1998), chess players (de Bruin et al., 2008), and everyday typists (Keith & Ericsson, 2007). It has even been proposed that deliberate practice can build attributes such as leadership ability and charisma that are commonly believed to be innate (Day, 2010; Ericsson et al., 2007).

Frequently, the main aim of talent-management practice is to develop future leaders and warrant the succession for management positions (Cohn et al., 2005). While deliberate

practice can be used as a leadership development tool (Day, 2010), learning from experience has been proposed as another central aspect of leadership development (McCall, 1998, 2010; Yost & Mannion-Plunkett, 2010). Learning from experience strongly relies on on-the job learning, which is particularly useful when it adheres to the following features: it takes place from the beginning of an individual's career onwards, poses a challenge but does not overstrain the individual, and confronts the individual with new problems or adverse conditions (McCall, 2010; Yost & Mannion-Plunkett, 2010). In addition, future leaders seem to learn a lot from either very good or very bad supervisors, action learning projects, extensive job rotation consisting of a number of strategic short-term assignments, and long-term leadership assignments (McCall, 2010; Yost & Mannion-Plunkett, 2010).

> *Proposition 4a:* An inclusive/developable talent philosophy is positively related to talent-management practices that facilitate the development of all employees.

Opportunities and Challenges

Proponents of the inclusive/developable talent philosophy suggest that this philosophy is beneficial in several regards. First, benefits can be expected due to highlighting the inherent focus on individual potential and development opportunities, and thereby creating a growth mindset among the workforce (Dweck, 2012). This mindset is related to enduring learning efforts (Yost & Chang, 2009); increases in intellectual achievement, willpower, resilience, and better conflict resolution (Dweck, 2012); decreased attention to stereotypes; and subsequent better performance on tests (Good, Aronson, & Inzlicht, 2003; Good, Rattan, & Dweck, 2012). An often cited example of the latter is a decreased attention to the belief that women's math ability is generally poor, resulting in a better performance on math tests. In addition, managers with a growth mindset provide more helpful coaching to their subordinates, and evaluate their performance more accurately because they recognize positive changes in their subordinates' behavior (Heslin & VandeWalle, 2008).

Second, instilling the belief that every employee can become an excellent performer might lead to Pygmalion effects, a special form of self-fulfilling prophecies (Rosenthal, 2010). The Pygmalion effect implies that an individual's expectations about another individual often fulfill themselves (Rosenthal, 2010). Since organizations with an inclusive/developable philosophy raise positive expectations regarding their employees' learning progress, their actual progress might eventually be substantial. Meta-analytic evidence supports the existence of the Pygmalion effect by showing that positive leader expectations are related to high subordinate performance (Kierein & Gold, 2000).

Third, it has been argued that developing a broad variety of talents can be an essential advantage for organizations operating in dynamic markets or business environments (Yost & Chang, 2009). As the specific talents or abilities that are required to run a business change along with changes in the environment, organizations cannot adequately forecast their

future talent needs (Cappelli, 2008). Stimulating personal growth and developing various forms of talent might help to compensate for these imprecise forecasts. Finally, organizations with an inclusive/developable talent philosophy might overcome the general scarcity of talent by growing the exact forms of talent that are required for the execution of their business processes.

Critics of this philosophy, however, argue that developing the whole workforce takes up substantial investments of time and money. Typically, training budgets are restricted, and if an organization decides to divide this budget equally between all members of the workforce, this might mean that each employee will only get a little training (Walker & LaRocco, 2002). In order to become excellent, however, employees have to spend a significant amount of time on training (it has often been argued that it takes up to 10,000 hours of deliberate practice to become an outstanding performer; Ericsson, 2009; Gladwell, 2008). It is unlikely that an organization's training budget can cover the costs of such intensive, individual training. Nonetheless, training that makes use of deliberate practice might be combined with learning based on on-the-job experiences. According to McCall (2010), this form of learning is highly efficient and comes at an affordable cost. Experience-based development does not require the implementation of additional talent-management programs; it only requires higher-level managers who are committed to and promote the necessity of learning, know which experiences or assignments are beneficial, and understand which lessons they can teach to whom (McCall, 2010). Next to managerial support, other structures that facilitate learning from experience are coworker support and a feedback-rich environment (Yost & Mannion-Plunkett, 2010).

A final challenge that is related to deliberate practice is the fact that it is an activity that is not inherently enjoyable (Ericsson et al., 1993). This is particularly relevant when assuming that anyone can become proficient in any domain, even if they are not at all interested in or drawn to this domain. Therefore, HR and talent managers need to consider possible motivating factors that stimulate engagement in deliberate practice. One effective motivator that has been indicated by empirical research is harmonious passion (Vallerand et al., 2007). Passion has been defined as "a strong inclination toward an activity that people like, that they find important, and in which they invest time and energy" (Vallerand et al., 2003, p. 756). Harmonious passion means that an individual willingly chooses to pursue the well-liked and personally meaningful activity, and that this activity can be combined with other important aspects in life (Vallerand et al., 2003). Organizations can foster harmonious passion by providing employees with tasks that they value, and by building up a work-context in which the basic human needs for competence, autonomy, and relatedness are fulfilled (Vallerand & Houlfort, 2003). In other words, employees should be able to interact with one another, to function effectively, and to shape specific aspects of their jobs on their own authority.

Proposition 4b: An inclusive developable philosophy provides the following opportunities to organizations: creating growth mindsets among the workforce, increased learning and performance due to creating positive expectations (Pygmalion effect), growing relevant talent from within.

Proposition 4c: An inclusive developable philosophy brings about the following challenges with regard to talent management: dealing with tight budgets for training and development, and motivating employees to continuously improve themselves.

DIRECTIONS FOR FUTURE RESEARCH

Table 1 presents an overview of the basic assumptions, implications for talent-management practice, opportunities, and challenges of the four talent philosophies that were introduced in the present article. Based on this work, and in line with recent publications in the field of HRM (Boxall, 2012; Boxall & Macky, 2009; Lepak et al., 2007), we highlight the need for more research investigating talent philosophies as an influential predictor of talent management practices, which, in turn, influence individual and organizational outcomes. In particular, research that examines how talent philosophies influence the choice for talent-management practices could provide interesting insights. To this end, a first step would be to conduct discourse analyses that investigate current organizational talent philosophies through examining official organizational policies or statements of talent managers. These analyses can be used to investigate to what extent the four talent philosophies introduced in the present article exist in practice. In addition, comparative case analyses can be conducted to compare the talent philosophies and talent-management systems of different organizations. These analyses can serve to test the propositions about the link between the talent philosophies and particular talent-management practices. As talent management is increasingly important for organizations operating on a global scale, cross-cultural comparisons might be of interest in this regard (Farndale et al., 2010; Kim & McLean, 2012; Tarique & Schuler, 2010). Finally, the propositions about the link between talent philosophies and opportunities and challenges for talent management can be investigated in several ways. Qualitative methods can be used to gain initial insights into the talent philosophies of organizational leaders and the opportunities and challenges they experience with regard to talent management. Furthermore, multi-level analyses can be conducted to investigate the relationship between the talent philosophies of organizations or managers, employee perceptions of talent management practices, and outcomes on the individual (e.g., employee satisfaction, well-being, engagement, commitment, and turnover intention) or organizational level (e.g., return on investment, retention rates, organizational performance).

Table 1
Summary of the Basic Characteristics of the Four Talent Philosophies

	Talent philosophy			
Characteristics	**Exclusive/stable**	**Exclusive/developable**	**Inclusive/stable**	**Inclusive/developable**
Basic assumptions about talent	– very rare – stable characteristic of a person	– very rare – individual potential that needs to be developed	– universal – stable characteristic of a person (often referred to as character strength)	– universal – individual potential that needs to be developed[a] – exclusively formed through practice[b]
Talent-management practice	– workforce differentiation (based on innate talent) – talent attraction (employer branding) – talent selection – talent retention	– workforce differentiation (based on potential) – potential identification – potential development	– strengths identification – increasing person-job fit – deploying strengths – managing weaknesses	– potential development[a] – development of any form of talent through deliberate practice[b] – experience-based (leadership) development[b]
Opportunities	– gain sustained competitive advantage through winning the war for talent – optimal allocation of resources through workforce differentiation	– optimizing return on training investments through investing in employees with potential – talent transfer – broad recruitment strategies based on the possibility of talent transfer	– positive employee perceptions of the goals of talent management – positive effects on employee well-being, motivation, and eventually performance	– fostering growth mindsets – learning success and enhanced performance due to Pygmalion effects – grow all forms of talent from within

Table 1 continued

	Talent philosophy			
Characteristics	**Exclusive/stable**	**Exclusive/developable**	**Inclusive/stable**	**Inclusive/developable**
Challenges	– scarcity of talent and resulting fierce (global) competition for it – managing employees who are not considered talented (dealing with possible negative effects and adhering to ethical standards)	– optimizing potential identification (in particular the measurement of factors that predict future growth)	– attracting and retention of relevant employees (with valuable knowledge or rare skills) who might be headhunted by competitors with exclusive philosophies – prevention of fixed mindsets	– efficient use and allocation of tight budgets for training and development – motivating employees to engage in deliberate practice

Note. [a]Related to the first approach within the inclusive/developable philosophy assuming that everyone has certain potentials to become excellent in a specific domain. [b]Related to the second approach within the inclusive/developable philosophy assuming that everyone can become excellent in any domain.

MANAGERIAL RELEVANCE

Organizations that aim to achieve sustained competitive advantage have to make optimal use of their resources, in particular human resources (Wright & Gardner, 2003). In this regard, the management of people who are considered to be talented has often been proposed as the decisive factor for gaining competitive advantage through people (Collings & Mellahi, 2009; Heinen & O'Neill, 2004). Traditionally, talent management has been based on exclusive philosophies, meaning that it was directed at a small percentage of the workforce who performed better than the rest, or displayed more (leadership) potential (Lewis & Heckman, 2006; Swailes, 2013). Exclusive talent-management approaches face two central challenges that are unlikely to dissolve in the near future. The first is the global scarcity of talent —meaning talent as defined according to exclusive philosophies— (Farndale et al., 2010; Schuler et al., 2011), and the second relates to the highly dynamic environment organizations operate in, which hampers the prediction of future talent needs (Yost & Chang, 2009). Investing in particular employees with very particular talents might turn out to be ineffective, because the types of talents that are needed are likely to change as fast as the environment. More inclusive talent philosophies can help overcome these challenges through a broader definition of the construct talent (Buckingham, 2005; Peterson & Seligman, 2004) and through the resulting broader investment in various forms of talent. We reason, that talent management will therefore experience a shift towards more inclusive philosophies in the future. This does not mean, however, that organizations will repudiate exclusive philosophies, but rather that they might start implementing hybrid talent-management systems, in which one talent-management approach is used for one group of employees and the other talent-management approach for another group of employees (cf. Stahl et al., 2012).

HR managers should note, however, that the outcomes of talent management not only depend on the overall philosophy held by an organization, but also on the individual philosophies of those people who are responsible for the implementation of HR or talent-management practices, mainly line managers (Boudreau, 2010; Purcell & Hutchinson, 2007). In order to make sure that talent management is implemented as designed, senior managers have to clearly communicate and explain their organization's talent philosophy to line managers. If necessary, they might also have to put considerable effort into persuading the line managers of the value of pursuing a certain philosophy, especially if the line manager holds a different view. Managers and line-managers need to embrace the same talent philosophy to send unambiguous signals to the employees whose perceptions, in turn, are crucial determinants of talent-management outcomes.

CONCLUSION

This paper has highlighted that underlying philosophies are a critical issue that needs to be discussed with regard to HR practices in general and with regard to talent management in particular. These philosophies determine the nature of HRM and talent management in practice, and consequently influence valuable outcomes such as employee well-being and performance (Boxall, 2012). This paper is among the first to derive testable propositions about different talent philosophies, their implications for talent-management practice, the outcomes they might yield, and the challenges they pose. As such, it can provide a valuable contribution to talent-management theory and might stimulate future research. In addition, the detailed discussion of the different talent philosophies can provide useful guidelines to HR or talent managers who implement or amend talent-management systems.

CHAPTER 4

HR MANAGERS' TALENT PHILOSOPHIES: ANTECEDENTS AND OUTCOMES

ABSTRACT

This paper builds on the assumptions that HR managers have different ideas about the nature, value, and instrumentality of talent—referred to as 'talent philosophies'—, and that these talent philosophies will determine how talent management is designed and implemented within an organization. In particular, we reasoned that talent philosophies can be organized within a framework consisting of the two dimensions exclusive versus inclusive and innate versus developable. We hypothesized that combining these two dimensions results in 4 discernable talent philosophies (the exclusive/stable; exclusive/developable; inclusive/stable; and inclusive/developable talent philosophy), which are influenced by an individual's implicit person theory, and which, in turn, influence an organization's definition of talent, workforce differentiation, and talent identification criteria. To test our research hypotheses, we conducted a cross-sectional study among 321 HR managers working in different organizations located in 49 different countries. Results of a cluster analysis corroborated the presence of the four hypothesized talent philosophies in our dataset. In line with expectations, we furthermore found support for the relationship between an individual's incremental person theory and his/her talent philosophy, and for the assumed relationship between talent philosophies and respectively an organization's definition of talent and workforce differentiation. Contrary to expectations, we did not find support for the assumed link between talent philosophies and talent selection criteria.

Keywords: implicit person theory, talent management, talent philosophy, talent selection, workforce differentiation

Chapter is based on:

Meyers, M. C., van Woerkom, M., Paauwe, J., & Dries, N. (*under review*). HR managers' talent philosophies: Antecedents and outcomes.

INTRODUCTION

Practitioners and academics agree that talent management currently is, and will likely continue to be one of the top priorities for human resources (HR) professionals. Despite this key role ascribed to talent management, there are a lot of different perspectives on the precise nature of the construct (Dries, Cotton, Bagdadli, & Oliveira, 2014; Lewis & Heckman, 2006). In other words, different people will give different answers to the question "What is talent management?". These different perspectives on talent management can be attributed to differences in individual perspectives on the nature, value, and instrumentality of talent (Gallardo-Gallardo et al., 2013; Swailes et al., 2014)—referred to as 'talent philosophies' (Meyers & van Woerkom, 2014). Talent philosophies have been proposed to vary along two dimensions. The first dimension captures the assumed rareness or exclusiveness of talent, ranging from the assumption that very few people are talented (exclusive) to the assumption that everyone has 'a talent' (inclusive) (Iles, Chuai, et al., 2010; Stahl et al., 2012). The second dimension captures the assumed malleability of talent, with the assumptions that talent is either a stable and innate, or a developable and acquired construct at the two extremes of the continuum (Howe et al., 1998). The combination of these two dimensions leads to four distinct talent philosophies that all have different implications for the nature of talent management: the exclusive/innate, exclusive/developable, inclusive/innate, and inclusive/developable talent philosophy (Meyers & van Woerkom, 2014).

The first aim of the present paper is to investigate these talent philosophies empirically by exploring whether all four talent philosophies are in fact held by HR managers of different organizations in different countries, or whether only some of the philosophies are found in practice. Second, we investigate incremental person theory (Dweck, 2006) as an individual-level antecedent of talent philosophy. According to Dweck (2006), individuals differ in the extent to which they believe that human characteristics are fixed (i.e., fixed mindset) or malleable (i.e., growth mindset), and we assume that these mindsets predict whether an individual holds a stable as opposed to a developable talent philosophy. Third, we investigate whether the different talent philosophies influence an organization's approach to talent management. In particular, we test whether an HR manager's talent philosophy influences his or her organization's 'official' definition of talent; the degree to which his or her organization engages in workforce differentiation—i.e., differential treatment of different employee groups; and the degree to which the process of talent identification relies on the assessment of stable, foundational criteria, such as personality and intelligence, or on the assessment of criteria that indicate an individual's capacity to grow and learn, such as adaptability and openness to feedback (Silzer & Church, 2009a).

To date, only few studies have addressed different practitioner perspectives on talent and talent management (e.g. Cooke, Saini, & Wang, 2014; Festing, Schäfer, & Scullion, 2013; Iles, Chuai, et al., 2010). These studies typically rely on qualitative research designs, focusing on

talent management within a specific (cultural) context. Festing et al. (2013), for instance, conducted telephone interviews with 700 chief executive officers of German small and medium sized enterprises (SME's), and found that an inclusive approach towards talent management prevailed in this sample. Qualitative data gained from interviews with representatives of Belgian multinational corporations (MNCs) (Dries & Pepermans, 2008), of Indian and Chinese MNCs (Cooke et al., 2014), of MNCs located in Beijing (Iles, Chuai, et al., 2010), and of medium-sized Spanish enterprises (Valverde, Scullion, & Ryan, 2013), however, were indicative of highly exclusive approaches to talent management. All of the studies mentioned above provide readers with valuable and detailed insights into the nature of talent management in particular contexts. Building on this research, we aim to draw a more comprehensive picture of talent management as implemented in practice by sampling representatives of organizations operating in diverse cultural and organizational contexts. Whereas existing studies have focused mainly on talent management approaches as implemented by organizations, our research adds depth by explicitly asking HR managers for their personal perspective on talent, that is, their talent philosophy. Building on theoretical work of Wilson (2012) and Meyers and van Woerkom (2014) and practical examples of Netflix (McCord, 2014) and Boeing (Peterson & Krieger, 2013), we reason that individual talent philosophies are a major predictor of implemented talent-management approaches. The quantitative nature of our research allows us to explore the relationship between these two constructs.

In sum, the present paper aims to shed light on the perceptions, ideas, and beliefs that underlie the different talent-management approaches found in practice. Parallel to a research stream on the reasoning behind HR policies in the context of strategic human resource management (SHRM; Lepak, Marrone, & Takeuchi, 2004), this paper focuses on increasing our understanding of how and why organizations implement particular talent-management approaches. An increased understanding of the reasoning underlying talent management can provide a foundation for future research on the effects of different talent-management approaches on employee- and organizational-level outcomes.

THEORETICAL FRAMEWORK

Talent Philosophies

Talent philosophies can be defined as the "fundamental assumptions and beliefs about the nature, value, and instrumentality of talent that are held by a firm's key decision makers" (Meyers & van Woerkom, 2014, p. 192). In other words, talent philosophies capture how senior (HR) managers define and understand talent, who they regard as talented, how valuable they consider talented employees to be, and how, according to them, talented employees should be deployed in order to maximize firm performance. Dries (2013) has pointed out that talent philosophies, or assumptions about talent, tend to vary considerably

between individuals, and that, overall, five tensions with regard to the nature of talent can be found in the talent-management literature. The two most prominent tensions which divide both scholars and practitioners relate to the questions whether talent is either rare or common (exclusive versus inclusive) and whether talent is determined by either nature or nurture (innate versus developable) (Dries, 2013; Howe et al., 1998; Meyers, van Woerkom, & Dries, 2013; Stahl et al., 2012). Based on these two tensions, Meyers and van Woerkom (2014) developed a conceptual framework of four distinct talent philosophies that vary along the two dimensions exclusive/inclusive and innate/developable (see Figure 1).

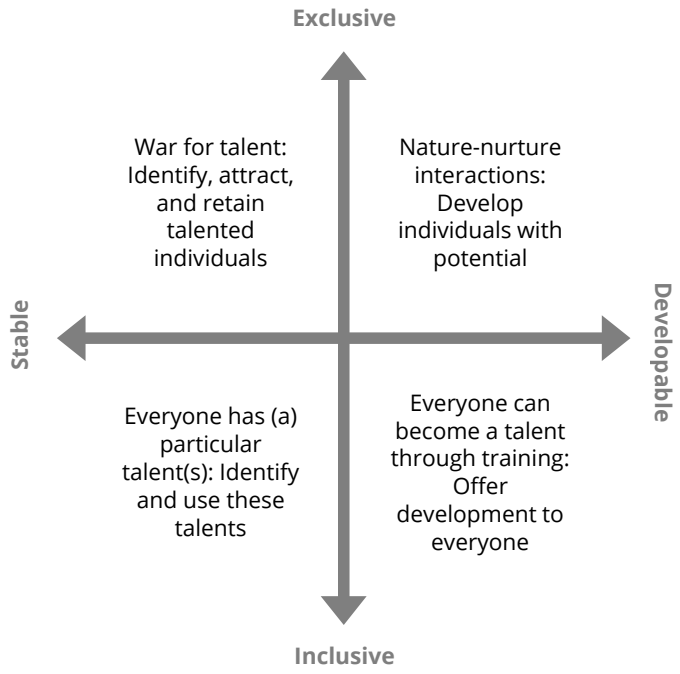

Figure 1: **Talent philosophies according to Meyers and van Woerkom (2014)**

The exclusive/stable talent philosophy

When asked to reflect on the term talent, lay people often mention individuals such as Marie Curie in the field of natural sciences, Pablo Picasso in the field of arts, and Wolfgang Amadeus Mozart in the field of music. Most Western lay people would also agree that talent is quite rare in the general population, limited to exceptional and well-known individuals such as the three mentioned above, and that nature has provided these individuals with special skills, capabilities, or 'gifts' (Tansley, 2011). Similarly, managers with an exclusive/stable talent philosophy believe that only very few employees are talented—typically less than 20 percent of the workforce (Welch & Welch, 2005)—and that talent is something these employees are born with. As a consequence of this belief, they commonly divide the workforce into a small group of employees who possess talent (i.e., A players, high performers, star performers), and a much larger group of employees who do not possess talent (i.e., B and C players) (Axelrod et al., 2002). Their basic assumption is that only the former group is likely to make substantial contributions to organizational performance, and is therefore crucial for attaining competitive advantage (Becker et al., 2009; Michaels et al., 2001; Snell et al., 1996). Consequently, their talent-management strategy of choice will be to provide favorable treatments to talented employees (e.g., bonuses, quick advancement within the firm, training opportunities) in order to increase their satisfaction and retention rates. On the recruitment end, they will try to identify, attract, and headhunt talented employees working for competitors—or, in other words, fight the 'war for talent' (Michaels et al., 2001).

The exclusive/developable talent philosophy

At the very heart of the exclusive/developable talent philosophy lies the belief that only few people are able to reach outstanding performance levels in a particular field, on the condition that they have a genetic predisposition for this field that is discovered and nurtured (Gagné, 2004). In other words, individuals holding an exclusive/developable philosophy understand talent as a latent construct that will be wasted if it remains undiscovered and that will only bear fruits and result in excellent performance if it is systematically developed. Employees, in this talent philosophy, are seen as talented if they show the potential or promise to perform in a specific, more challenging (leadership or expert) position at a higher hierarchical level in the future (Altman, 1997; Silzer & Church, 2009a). In practice, such employees are often referred to as 'high potentials', and provided with a variety of developmental opportunities and assignments which serve the purpose of unlocking their potential. Commonly, not more than 10 to 15 percent of the organizational population are identified as high-potential employees (Ulrich & Smallwood, 2012), emphasizing the exclusive nature of talent in the context of this talent philosophy.

The inclusive/stable talent philosophy

At the turn of this century, Seligman and Csikszentmihalyi (2000) published an introductory article on positive psychology as a scientific field, in which they highlighted that each and every individual possesses stable, positive traits, which they refer to as 'strengths'. Strengths are defined as "ways of behaving, thinking, or feeling that an individual has a natural capacity for, enjoys doing, and which allow the individual to achieve optimal functioning while they pursue valued outcomes" (Quinlan et al., 2012, p. 1146). Moreover, theory suggests that individuals who are able to use their strengths will not only feel better about themselves but will also perform at their personal best (Peterson & Seligman, 2004; Seligman & Csikszentmihalyi, 2000). In line with this reasoning, managers holding an inclusive/stable talent philosophy will appreciate the strong points of all employees, as diverse as they may be, and will aim to increase person-job fit so that employees work on tasks that play to their individual strengths. The underlying assumption is that organizations will flourish if they succeed in uncovering and using the strengths of all employees (Peterson & Park, 2006).

The inclusive/developable talent philosophy

Individuals who believe that talent is both prevalent and malleable, basically assume that all seemingly 'ordinary' people can become extraordinary performers. Within this philosophy, two different streams of thought can be discerned. On the one hand, we find those who believe that every individual can reach excellent performance levels in any domain, as long as sufficient time and effort is invested into practice and learning experiences (Ericsson et al., 1993). On the other hand, we find those who believe that every individual can reach excellent performance levels in at least some domains, depending on the inherent potential or constellation of strengths he or she possesses (Biswas-Diener et al., 2011). Both streams of thought reflect a particular belief in the human capability to change and grow (cf. growth mindset; Dweck, 2012), and are, in organizational practice, associated with a strong focus on the training and development of all employees. Managers holding this philosophy believe that leaders and other incumbents of key organizational positions hold these positions because of the experiences they accumulated and the lessons they learned, and not because they were 'born' to be there (Ericsson et al., 2007; Gladwell, 2008).

Implicit Person Theory as an Antecedent of Talent Philosophy

Research by Carol Dweck (2006, 2012) has shown that perceptions about the malleability of human characteristics differ markedly between individuals. While some individuals are convinced that their own core characteristics as well as the core characteristics of others are built-in by nature and therefore cannot be changed (i.e., entity or fixed mindset), others believe that core human characteristics are open to development and can be changed through nurture (incremental or growth mindset; Dweck, 2012). Both fixed and growth mindsets concern the whole range of human attributes including intelligence, morals, values,

personality, and behavioral patterns (Dweck, 2006, 2012). Supposedly, these mindsets also capture beliefs about talent, and whether or not it can be developed. Building on this, we argue that managers with a fixed mindset who believe that talent is a trait determined by nature, will either hold an exclusive/innate or an inclusive/innate talent philosophy. Similarly, we reason that managers with an incremental mindset believing that talent can be developed through effort, will either hold an exclusive/developable or an inclusive/developable talent philosophy. Comparing the two latter philosophies, it may furthermore be argued that the incremental mindset will be even more pronounced in the group with the inclusive/developable talent philosophy, because those holding this type of talent philosophy expect that all people can change for the better (Biswas-Diener et al., 2011; Ericsson et al., 1993). Managers with an exclusive/developable philosophy, by contrast, might believe that only those with specific and rare potentialities have the capacity to change and grow (Silzer & Church, 2009a), whereas the growth capacity of other people might be seen as limited.

In line with this reasoning, we formulate the following hypotheses:

> *Hypothesis 1a*: HR managers with an exclusive/developable or an inclusive/developable talent philosophy score higher on the variable growth mindset than HR managers with an exclusive/innate or an inclusive/innate talent philosophy.
>
> *Hypothesis 1b*: HR managers with an inclusive/developable talent philosophy have a more pronounced growth mindset than HR managers holding an exclusive/developable talent philosophy.

Outcomes of Talent Philosophies

Scholars in the field of SHRM have argued that philosophies or beliefs about people in general and employees in particular exert a strong influence on the specific implementation of HR practices in organizations and, in turn, on the effects of these practices (Boxall & Macky, 2009; Lepak et al., 2007). Paauwe (2004) specified that an organization's key decision makers—the organization's 'dominant coalition'—shape organizational practices, procedures, and processes according to their norms, values, attitudes, and beliefs, or, in other words, philosophies about people. Building on this, we reason that HR managers, as part of the dominant coalition (Paauwe, 2004), will configure talent-management practices so as to reflect their talent philosophies (McCord, 2014; Meyers & van Woerkom, 2014). In particular, we expect that HR managers' talent philosophies, that is, how they personally understand and interpret talent, will affect the definition of talent that is used by their organizations, the degree of workforce differentiation, and the degree to which the organization emphasizes growth (developable) versus foundational (stable) criteria in its assessments of talent.

The effect of talent philosophies on organizational definitions of talent

It stands to reason that the definition of talent held by an HR manager should be aligned with the 'official' definition of talent used by the organization he or she is working for. This alignment can potentially originate from several different processes. First, it is likely that organizational hiring decisions concerning HR staff are informed by the fit between job candidates and attributes of the organization such as its culture, overall values, and strategic orientation (Bowen, Ledford, & Nathan, 1991). This requires that an HR manager's talent philosophy and a hiring organization's talent-management definition are aligned right from the outset of their employment relationship. Second, one might also reason that either the HR manager's or the organizational definition of talent is subject to adaptation after a new HR manager is appointed. On the one hand, it might be that HR managers revise their personal perceptions of talent based on the organizational talent definition when moving through the organizational socialization process. Meglino and Ravlin (1998) explain this revision of personal perceptions by arguing that individuals form and revise their values based on their assumptions about appropriate behavior in a given environment. On the other hand, it might also be that the organizational definition of talent is adapted in order to match the talent philosophy of an HR manager after he or she has been appointed. Throughout this study, we will argue that senior management has a very active role in shaping organizational definitions, processes, structures, and strategies according to their own values, beliefs, and ideas (Hambrick & Mason, 1984; Paauwe, 2004). While we recognize that there might be reciprocal influences between individuals and organizations, we do think that HR managers, as part of the organization's dominant coalition (Hambrick & Mason, 1984; Paauwe, 2004), exert a strong influence on strategic choices and definitions within the area of HR. We thus reason that if an HR- or talent manager holds the belief that only very few people are talented, he or she is prone to implement a talent-management approach that is directed at those few employees only. Parallel to this, we assume that HR managers who consider all employees within an organization as talented will introduce an organizational talent definition that reflects this inclusive nature of talent. Building forth on this, we formulate the following hypotheses:

> *Hypothesis 2*: The exclusive/innate and the exclusive/developable talent philosophies are positively, and the inclusive/innate and the inclusive/developable talent philosophies negatively, related to an exclusive organizational definition of talent.

The effect of talent philosophies on workforce differentiation

The essence of workforce differentiation can be understood as making disproportionate investments in employees who are expected to generate disproportionate returns for the company (Boudreau & Ramstad, 2005). In other words, it implies differentiating between employees based on the potential contribution to the firm they are capable of making, and

treating them accordingly. In the wider talent-management literature—and mostly in line with exclusive approaches to talent management—it has been argued that workforce differentiation is, in fact, the key feature that distinguishes talent management from human resource management more generally (Collings & Mellahi, 2009; Gelens et al., 2013). That is, both HRM and talent management make use of similar practices for the purpose of attracting, identifying, developing, and retaining employees. HR practices, however, are targeted towards all employees, whereas talent-management practices are typically reserved for talented employees only. Commonly, the latter practices comprise special developmental opportunities such as management skills trainings, coaching and mentoring, flexible work arrangements, fast-track advancement to higher organizational positions, and special rewards and bonuses (Dries & Pepermans, 2008).

The extent to which an organization differentiates between its employees in the context of talent management will depend on assumptions about the size or variance of contributions to organizational performance made by different 'talent pools' within the workforce. On the one hand, advocates of the idea that talent is a highly exclusive construct typically propose that contributions differ markedly between individuals and that talented employees—referred to as high potentials, high performers, A-players, or stars—contribute much more to a firm's overall performance than average employees (Becker & Huselid, 2006; Boudreau & Ramstad, 2005; Michaels et al., 2001). Building on this, it can be expected that HR managers who inherently believe that some people possess talent while others do not—that is, managers with an exclusive talent philosophy—will differentiate to a larger extent between 'the best' and 'the rest' and will, consequently, implement talent-management systems that are directed at talented employees only (for a practical example of Netflix, see: McCord, 2014). We therefore expect that the positive relationship between an exclusive philosophy and workforce differentiation will be equally applicable for both the exclusive/innate and the exclusive/developable talent philosophy.

On the other hand, supporters of the idea that everyone possesses talent (i.e., an inclusive understanding of talent) believe that all employees are of equal value to the organization and that, along general lines, the contributions of all employees to the organization matter (Buckingham & Vosburgh, 2001; Yost & Chang, 2009). Even more so, these scholars reason that an organization misses out on opportunities to maximize firm performance when investing in a small percentage of the workforce only. Building on this, we propose that HR managers who hold an inclusive talent philosophy will not differentiate between different employees to the extent that managers with an exclusive talent philosophy do. Again, we assume that this proposition is applicable for both the inclusive/stable and the inclusive/developable talent philosophy. In line with this reasoning, we formulate the following hypotheses:

Hypothesis 3: The exclusive/innate and the exclusive/developable talent philosophies are positively, and the inclusive/innate and the inclusive/developable talent philosophies negatively, related to the degree of workforce differentiation within an organization.

The effect of talent philosophies on talent identification: Reliance on growth or foundational dimensions

Organizational representatives have reported to identify and assess employee talent based on a variety of criteria including leadership competencies, performance records, potential, career drive or motivation, mobility, adaptability or flexibility, specific experiences, learning abilities, personality, and commitment to the company (Silzer & Church, 2010). According to Silzer and Church (2009a), these criteria can be categorized into three dimensions: a foundational, growth, and career dimension. The foundational dimension captures relatively stable traits that supposedly do not change much throughout one's career, such as cognitive abilities and personality; the growth dimension encompasses criteria that are also rather stable in and out of themselves, but that facilitate personal development and growth in other areas, such as adaptability, learning orientation, and motivation; and the career dimension captures mostly malleable indicators of future career success, such as career-relevant performance records, career experiences, and technical or functional skills. The criteria of the foundational and growth dimensions are relevant predictors of future performance in a wide variety of functions, irrespective of specific career paths, whereas criteria of the career dimension are function- or career path-specific (Silzer & Church, 2010). That is, if an organizations was about to recruit one candidate for a leadership function and one candidate for a technical function, both candidates would probably undergo the same series of personality- and/or cognitive ability tests. However, only the candidate for the leadership role would have to demonstrate his/her leadership abilities during the assessment process, and only the candidate for the technical function would have to demonstrate his/her technical proficiency. As the criteria of the career dimension that are assessed to identify talent will thus vary across organizations and organizational function, we will only ask HR managers to rate their reliance on the foundational and growth dimension for the purpose of identifying talent.

There appear to be large inter-organizational differences in the policies that are used for identifying organizational talents (Pepermans et al., 2003), and, arguably, in the importance attached to either the growth- or the foundational dimension in this regard. We reason that these differences can be explained in part by the talent philosophies of organizations' HR managers. Proponents of the exclusive/stable talent philosophy typically equate talent with particular personality traits or superior intelligence (DeLong & Vijayaraghavan, 2003), criteria belonging to the foundational dimension (Silzer & Church, 2009a). Proponents of the inclusive/innate talent philosophy, similarly, equate talents with individual strengths defined

as stable traits of character (also belonging to the foundational dimension; Peterson & Seligman, 2004). In the context of both philosophies, talent can therefore be assessed directly, by measuring the respective stable criteria that are associated with talent.

Conversely, the measurement of talent in the context of the inclusive/developable and exclusive/developable talent philosophy must take place in an indirect way. By definition, the term potential, that is used interchangeably with talent by advocates of an exclusive/developable talent philosophy, is something that is not yet there (Altman, 1997), which renders its measurement complicated. Instead of being measured directly, potential will therefore be evaluated based on a number of criteria that indicate an individual's ability to change and grow in the future—that is, criteria belonging to the growth dimension (Silzer & Church, 2009a). Advocates of an inclusive/developable talent philosophy commonly interpret talent as a manifestation of outstanding performance, and outstanding performance can potentially be reached by all individuals who invest sufficient time into training and gaining experiences (Ericsson et al., 2007). Training investments, in turn, are likely to depend upon an individual's motivation, willingness to make personal sacrifices (Ericsson et al., 2007), and his or her learning orientation, drive, and openness to feedback, all of which appertain to the growth dimension (Silzer & Church, 2009a). Building on this, we propose that advocates of the exclusive/developable and inclusive/developable talent philosophy are much more likely to identify talent based on criteria of the growth- than of the foundational dimension, which translates into the following research hypothesis:

> *Hypothesis 4*: The exclusive/innate and the inclusive/innate talent philosophies are negatively, and the inclusive/developable and the exclusive/developable talent philosophies positively, related to the extent to which talent identification is based on growth criteria as opposed to foundational criteria.

METHOD

Sample and Procedure

Data were collected by means of an online survey which was sent to HR directors or senior HR managers of companies operating in diverse countries all over the world. In order to increase the number of responses, respondents were asked to forward the survey to other senior HR managers or directors in their network (i.e., snowball sampling). 458 respondents started filling in the questionnaire, but 137 respondents dropped out after answering some demographic and qualitative questions.

Of the remaining 321 participants, 62.3 percent were female and their mean age was 59.56 years. On average, respondents had 12.25 years of experience in an HR function. Respondents had 44 different nationalities and worked in 49 different countries. To describe the nationality of the respondents in more detail, we refer to the 10 clusters of culture that

originated from the GLOBE [Global Leadership and Organizational Behavior Effectiveness] study, a major, global research project that draws on a sample of over 17,000 managers working in 62 different societies (House, Hanges, Javidan, Dorfman, & Gupta, 2004). The sample characteristics including nationality of respondents, country where they work, and information about the companies they work for are summarized in Table 1.

Table 1
Overview of Sample Characteristics (Total *N* = 321)

	N	%		N	%
Gender			**Company ownership form**		
Male	121	37.7	Private	262	81.6
Female	200	62.3	Public	59	18.4
Nationality (GLOBE cluster)			**Company size (number of employees)**		
African	6	1.9	<100	52	16.2
Anglo	93	29.0	100-500	40	12.5
Confucian	4	1.2	501-1,000	29	9.0
Eastern European	23	7.17	1,001-5,000	57	17.8
Germanic	86	26.8	5,001-10,000	29	9.0
Latin American	18	5.6	>10,000	114	35.5
Latin European	70	21.8			
Nordic	10	3.1	**Multinational**		
Southern Asian	10	3.1	Yes	186	57.9
			No	135	42.1
Location of company (GLOBE cluster)			**Sector**		
African	6	1.9	Manufacturing	48	15.0
Anglo	94	29.3	Professional, Scientific, and Technical Services	37	11.5
Confucian	5	1.6			
Eastern European	22	6.9	Finance/Insurance	35	10.9
Germanic	87	27.1	Educational services	31	9.7
Latin American	19	5.9	Health Care and Social Assistance	21	6.5
Latin European	72	22.4			
Nordic	10	3.1	Information	12	3.7
Southern Asian	6	1.9	Retail Trade	9	2.8
			Other	128	39.9

Measures

Belief that talent is innate

The belief that talent is innate was measured using the item "To what extent do you believe that talent is something people are born with?" The answer scale reached from zero to one hundred percent (0-100%), and participants were instructed to drag a bar in order to indicate their response to this question. High scores on this scale signal a strong belief that talent is innate, whereas low scores indicate the belief that talent can be developed. Descriptive analyses revealed that respondents used the whole range of the scale (minimum value = 0; maximum value = 100; *M* = 55.60; *SD* = 22.88).

Belief that talent is inclusive

The belief that talent is inclusive (i.e., that everyone has talent) was measured using the item "What percentage of all the employees within your company do you, personally, consider 'talented'?" Again, the answer scale reached from zero to one hundred percent (0-100%), and responses needed to be indicated by dragging a bar along this scale. Whereas high scores on this scale signal the belief that most or even all people are talented (i.e., inclusive), low scores represent an exclusive understanding of talent, that is that only very few people are talented. Again, descriptive analyses revealed that respondents used the whole range of this scale (minimum value = 0; maximum value = 100; *M* = 51.65; *SD* = 32.28).

Implicit person theory

The respondents' implicit person theory—that is, whether they hold a fixed or growth mindset—was measured using the 8-item 'Beliefs about Human Nature' scale (Levy & Dweck, 1997). Items such as "People can change even their most basic qualities (reverse coded)" and "The kind of person someone is, is something very basic about them and it can't be changed very much" were rated on a 6-point Likert scale from one (1 = Strongly disagree) to six (6 = Strongly agree). High scores on this scale indicate a fixed or entity mindset, whereas low scores indicate a growth or incremental mindset. The Cronbach's alpha for the scale was good (α = .89).

An organization's inclusive versus exclusive definition of talent

In order to measure whether the organizations the respondents worked for had an inclusive versus exclusive definition of talent, a six-item scale was developed that reflected the descriptions of inclusive and exclusive approaches to talent management proposed by Iles, Chuai, and Preece (2010). We asked respondents to indicate whether the items "Everybody has a certain talent (reverse coded)", "A talent is not something that everyone possesses, but just the lucky few", "A talent is a special individual that can make a significant difference to a company", "It is a logical choice that developmental assignments and resources are only invested in the most promising talents", "Everybody is gifted in one way or another, but we

need to offer the right context to develop those gifts into talents (reverse coded)", and "Everybody has to discover his or her own talent, so that we can assign him or her to the right job (reverse coded)" reflected the official position of their company. Responses were given on a 5-point Likert scale from one (1 = Not at all the position of my company) to five (5 = Completely the position of my company). Principal component analysis revealed that the six items loaded onto two factors. Based on factor loadings and item content, we decided to exclude one item from the scale (i.e., "It is a logical choice that developmental assignments and resources are only invested in the most promising talents."). The five remaining items loaded on one factor with factor loadings of .36 or higher. Internal consistency of the scale proved to be adequate (α = .67).

Workforce differentiation

The degree of workforce differentiation within the company was measured by a self-developed 7-item scale. Respondents were asked to rate the extent to which they agreed with statements such as "A high potential is treated differently from other employees within the organization" and "A high potential gets more opportunities for training than other employees within the organization" on a 5-point Likert answer scale from one (1 = do not agree at all) to five (5 = completely agree). Principal component analysis revealed a clear one factor structure of the scale with all seven items displaying factor loadings of .59 or higher. Cronbach's alpha indicated that the scale had good internal consistency (α = .79).

Focus on growth versus foundational dimensions for talent identification

To measure the extent to which talent identification in an organization is based on either the foundational- or growth dimension of talent (Silzer & Church, 2009a), nine pairs of identification criteria were presented to the respondents. Within each pair, one identification criterion belonged to the growth-, and one to the foundational dimension. All identification criteria were based on the classification developed by Silzer and Church (2009a). Examples of pairs are cognitive abilities (foundational dimension) versus learning orientation (growth dimension), and sociability (foundational dimension) versus adaptability (growth dimension). For each pair of identification criteria, respondents were asked to select the one that they considered more important for talented employees to have. Per pair, we assigned the value 1 if respondents selected the criterion of the growth dimension or the value 0 if they selected the criterion of the foundational dimension. The scores of the nine pairs of variables were then added to form the overall scale score, which consequently ranged from 0 to 9.

Statistical Analysis

We conducted cluster analysis in SPSS 19 on the two variables reflecting beliefs about talent (belief that talent is innate versus belief that talent is inclusive) in order to explore whether our data corroborated the existence of the four different talent philosophies proposed in the literature (Meyers & van Woerkom, 2014). To this end, we followed a two-step approach

(Burns & Burns, 2008; Milligan, 1980). In a first step, we used a hierarchical cluster analysis following Ward's method (Ward, 1963) to determine the number of clusters represented in the data. Similarity between two data points was measured by squared Euclidian distances, the appropriate technique for data in which the elevation of scores (low versus high scores) is a relevant grouping criterion (Clatworthy, Buick, Hankins, Weinman, & Horne, 2005). The number of clusters was assessed based on the dendrogram and agglomeration schedule (Clatworthy et al., 2005). In a second step, we used k-means clustering as an iterative partitioning method to form the previously indicated number of clusters. The resultant clusters were then compared on a range of control variables to examine their validity. These variables included gender, age, experience in HR, company size, whether or not the company was a multinational, and company ownership (private versus public). In addition, the clusters were compared in terms of implicit person theory as a test of Hypothesis 1.

In order to investigate whether the proposed clusters predicted the organization's definition of talent, the degree of workforce differentiation, and a focus on growth versus foundational criteria in talent identification (Hypotheses 2-4), sequential multiple regression analyses were conducted. Dummy variables were created, representing the clusters.

RESULTS

Results of the hierarchical cluster analysis following Ward's method, in which we clustered the data based on the two variables 'belief that talent is innate' and 'belief that talent is inclusive' (these variables were uncorrelated; $r = .06$, $p = ns$), revealed that there were indeed four substantial clusters in the data. Based on this information, we formed four clusters through K-means clustering (as recommended by Burns & Burns, 2008; Milligan, 1980). As can be seen in Table 2, the four clusters represent the four talent philosophies proposed. Cluster 1 ($N = 80$) encompasses respondents who scored low on the belief that talent is innate and high on the belief that talent is inclusive (inclusive/developable philosophy). Cluster 2 ($N = 84$) comprises respondents who scored high on the belief that talent is innate and low on the belief that talent is inclusive (exclusive/innate philosophy). Cluster 3 ($N = 71$) represents respondents with an inclusive/innate philosophy, indicated by high scores on both variables. Finally, Cluster 4 ($N = 84$) encompasses respondents who scored low on the belief that talent is innate and low on the belief that talent is inclusive (exclusive/developable philosophy). One-way analyses of variance corroborated that the means of the variables belief that talent is innate ($F(3,315) = 255.62$, $p < .001$) and belief that talent is inclusive ($F(3,315) = 387.89$, $p < .001$) differed significantly between the four clusters. Conform to expectations, Tukey post-hoc tests indicated that both innate clusters (Cluster 2 & 3) had higher mean scores on the variable 'belief that talent is innate' than the two developable clusters (Cluster 1 & 4), and that both inclusive clusters (Cluster 1 & 3) had higher mean scores on the variable 'belief that talent is inclusive' than the two exclusive clusters (Cluster 2 & 4).

Table 2
Characteristics of Clusters

	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Differences between Clusters
Talent Philosophy	Incl/dev	Excl/inn	Incl/inn	Excl/dev	
N	80	84	71	84	319 (*N* total)
Belief that talent is innate	39.02 (12.94)	74.20 (10.44)	76.61 (11.48)	35.01 (14.30)	$F(3,315) = 255.62$, $p < .001$
Belief that talent is inclusive	81.85 (14.94)	26.85 (16.28)	81.65 (15.06)	22.32 (13.49)	$F(3,315) = 287.89$, $p < .001$
Individual characteristics					
Gender (%)					$\chi^2(3,319) = 1.18$, p = ns
Male	35.0	34.5	40.8	40.5	
Female	65.0	65.5	59.2	59.5	
Age	62.09 (10.91)	57.16 (9.51)	59.77 (11.56)	59.11 (9.83)	$F(3,216) = 2.18$, $p < .10$
Experience in HR	14.56 (9.27)	12.65 (8.32)	12.18 (7.20)	12.98 (8.80)	$F(3,215) = .79$, p = ns
Implicit person theory	3.27 (1.04)	3.83 (.85)	3.83 (.97)	3.41 (.97)	$F(3,315) = 7.17$, $p < .001$
Organizational characteristics					
Ownership form (%)					$\chi^2(3,319) = 1.98$, p = ns
Private	82.5	85.7	77.5	79.8	
Public	17.5	14.3	22.5	20.2	
Company Size (%)					$\chi^2(15,319) = 28.15$, $p < .05$
< 100 employees	23.8	10.7	23.9	7.1	
100-500 employees	10.0	19.0	7.0	13.1	
501-1000 employees	5.0	10.7	11.3	9.5	
1001-5000 employees	18.8	15.5	11.3	25.0	
5001-10000 employees	8.8	14.3	7.0	6.0	
> 10.000 employees	33.8	29.8	39.4	39.3	
Multinational (%)					$\chi^2(3,319) = 5.77$, p = ns
Yes	57.5	61.9	46.5	64.3	
No	42.5	38.1	53.5	35.7	

We compared the four clusters on a number of variables reflecting characteristics of the respondents and the organizations they worked for (see Table 2). We started by comparing the clusters with regard to the control variables gender, age, and experience in HR. Results indicated that the clusters differed neither in terms of gender nor in terms of respondent experience in HR. We found a marginally significance difference in terms of the age of the respondents ($F(3,216) = 2.18$, $p < .10$), reflecting that respondents who were categorized as belonging to Cluster 1 were, on average, slightly older than respondents in Cluster 2. In other words, HR managers who held an inclusive/developable talent philosophy were slightly older than respondents with an exclusive/innate philosophy.

With regard to the organizational control variables, we did not find any significant between-cluster differences in the variables ownership form (public versus private) and multinational (yes/no). We did, however, find a significant difference with regard to company size ($\chi^2(15,319) = 28.15$, $p < .05$) and a closer inspection of results revealed that Cluster 1 (inclusive/developable) and Cluster 3 (inclusive/innate) encompassed a higher proportion of very small companies (<100 employees) than the other two clusters. In Cluster 2 (exclusive/innate), a slightly higher proportion of companies with 5,000 to 10,000 employees was found than in the other three clusters, and Cluster 4 (exclusive/developable) included the highest proportion of companies with 1,000 to 5,000 employees.

Finally, we proceeded by testing Hypothesis 1a and found significant between-cluster differences for implicit person theory ($F(3,315) = 7.17$, $p < .001$). Post-hoc analyses (Tukey) revealed that the two clusters with an innate talent philosophy (Cluster 2 and 3) had higher mean values on this variable than respondents in the two other clusters. Since high scores on this scale represent a fixed as opposed to a growth mindset, these results are conform to our expectations and thus corroborate Hypothesis 1a. Contrary to our expectations, however, we did not find significant differences between the inclusive/developable and exclusive/developable cluster on this variable (even though the inclusive/developable cluster did demonstrate a lower mean), rejecting Hypothesis 1b.

The correlations between all study variables are reported in Table 3. Table 4 shows the results of three sequential multiple regression analyses which we conducted to predict the exclusiveness of an organization's definition of talent management, the degree of workforce differentiation, and the focus on growth or foundational criteria for talent identification by membership of one of the four talent philosophy clusters (note that the inclusive/innate talent philosophy cluster serves as a reference category in the analyses).

While none of the control variables exerted a significant influence on the exclusiveness of the organization's talent definition in the first regression analysis, adding the three dummy variables led to a significant increase in R square ($\Delta R^2 = .12$, $p < .001$). Both the exclusive/developable ($\beta = .38$, $p < .001$) and the exclusive/innate cluster ($\beta = .37$, $p < .001$)

Table 3

Means, Standard Deviations, and Correlations between Study Variables

	M	SD	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1. Gender[a]	-	-	-												
2. Age	59.56	10.52	-.21**	-											
3. Experience in HR	13.25	8.61	-.13	.73**	-										
4. Implicit person theory[b]	3.58	.98	.11*	-.09	-.05	.89									
5. Ownership form[c]	-	-	.07	.07	-.02	-.09	-								
6. Multinational[d]	-	-	.09	.09	.01	-.07	.33**	-							
7. Company size[e]	3.98	1.89	-.07	-.04	.10	.08	-.07	-.60**	-						
8. DUM incl/dev[f]	-	-	.03	.15*	.10	-.18**	-.02	.01	-.06	-					
9. DUM excl/dev[f]	-	-	-.04	-.02	-.01	-.10	.03	-.08	.09	-.35**	-				
10. DUM excl/innate[f]	-	-	.04	-.13*	-.04	.15**	-.07	-.05	-.02	-.35**	-.36**	-			
11. Exclusiveness of organization's talent definition	2.58	.68	.03	-.15*	-.09	-.05	.01	-.09	.10	-.12*	.21**	.19**	.67		
12. Workforce differentiation	3.38	.66	.00	.05	.16*	-.03	-.05	-.26**	.23**	-.07	.12*	.14*	.31**	.79	
13. Talent identification (growth versus foundational)	5.04	1.47	-.01	-.02	.06	.02	-.01	-.00	.12*	.04	-.05	.00	-.06	-.06	-

Note. [a] Gender (1 = male; 2 = female); [b] higher values indicate a fixed mindset; [c]Ownership form (1 = private company; 2 = public company); [d]Multinational (1 = yes; 2 = no); [e]Company size (treated as a continuous variable with higher values indicating bigger companies); [f]Dummies for talent philosophies (1 = belonging to this cluster; 0 = not belonging to this cluster); Cronbach's Alphas are presented on the diagonal; * $p < .05$; ** $p < .01$.

Table 4

Results of Sequential Multiple Regression Analyses Predicting the Organization's Definition of Talent, Workforce Differentiation, and the Identification of Talent based on the Growth versus Foundational Dimension

	Exclusiveness of organization's talent definition				Workforce Differentiation				Focus on Growth versus Foundational Criteria			
	B(SE)	β	*B(SE)*	β	*B(SE)*	β	*B(SE)*	β	*B(SE)*	β	*B(SE)*	β
Step 1												
Gender[a]	.02(.10)	.01	.02(.09)	.01	.06(.10)	.04	.04(.09)	.04	-.07(.22)	-.02	-.08(.22)	-.03
Age	-.01(.01)	-.16	-.01(.01)	-.08	.00(.01)	-.08	-.08(.01)	-.03	-.02(.02)	-.11	-.02(.02)	-.12
Experience in HR	.00(.01)	.01	.00(.01)	-.04	.02(.01)	.21*	.21(.01)	.18	.02(.02)	.12	.02(.02)	.12
Implicit person theory[b]	-.05(.05)	-.07	-.04(.05)	-.05	-.03(.05)	-.05	-.05(.05)	-.05	.02(.11)	.01	.03(.11)	.02
Ownership form[c]	.07(.13)	.04	.06(.12)	.03	.06(.13)	.04	.04(.12)	.03	-.09(.29)	-.02	-.07(.29)	-.02
Multinational[d]	-.09(.13)	-.06	-.01(.12)	-.01	-.30(.12)	-.23*	-.23(.12)	-.20*	.36(.28)	.12	.36(.29)	.12
Company size[e]	.02(.03)	.06	.03(.03)	.08	.03(.03)	.08	.08(.03)	.09	.13(.07)	.17	.14(.07)	.17
Step 2												
DUM incl/dev[f]			.23(.13)	.15			.11(.13)	.07			.15(.31)	.05
DUM excl/dev[f]			.58(.13)	.38***			.31(.13)	.21*			-.14(.31)	-.04
DUM excl/innate[f]			.57(.13)	.37***			.36(.13)	.24**			-.01(.31)	.00
	R^2 =.04		ΔR^2 =.12***		R^2 =.11		ΔR^2 =.05*		R^2 =.03		ΔR^2 =.01	

Note. [a] Gender (1 = male; 2 = female); [b] higher values indicate a fixed mindset; [c]Ownership form (1 = private company; 2 = public company); [d]Multinational (1 = yes; 2 = no); [e]Company size (treated as a continuous variable with higher values indicating bigger companies); [f]Dummies for talent philosophies (1 = belonging to this cluster; 0 = not belonging to this cluster); * $p < .05$; ** $p < .01$; *** $p < .001$.

were significant predictors of the degree to which an organization's talent definition is exclusive, thereby supporting Hypothesis 2. Belonging to the third cluster, the inclusive developable cluster, was also positively related to a slightly more exclusive talent definition than belonging to the reference cluster (inclusive/innate), but this effect did not reach statistical significance (β = .15, p = .08).

In the second regression analysis—in which workforce differentiation was specified as the dependent variable—the control variables experience in HR and multinational were found to be significant predictors of workforce differentiation. In particular, results reveal that more experienced HR managers reported higher degrees of workforce differentiation (β = .21, p < .05), and that companies that did not operate internationally had lower degrees of workforce differentiation (β = -.23, p < .05). Adding the dummy variables in the second step of the regression analysis led to a significant increase in explained variance (ΔR^2 = .05, p < .05). Again, the exclusive/developable (β = .21, p < .05) as well as the exclusive/innate cluster (β = .24, p < .01) were significantly related to higher degrees of workforce differentiation, which provides support for Hypothesis 3.

Finally, the third regression analysis revealed that none of the control variables had a significant influence on the focus of talent identification (growth versus foundational dimension), jointly explaining three percent of variance of this variable. Adding the three talent philosophy dummy variables in the second model did not lead to a significant increase in explained variance (ΔR^2 = .01, ns). None of the dummies had a significant effect on the focus of talent identification, which rejects Hypothesis 4.

DISCUSSION

In the present paper we aimed to shed light on the talent philosophies held by HR managers, as well as some of the antecedents and outcomes of these philosophies. To the best of our knowledge, this is the first empirical investigation of this matter.

Our descriptive analyses indicated that our respondents' ideas about talent differed markedly (Dries et al., 2014). While some respondents reported that they believe talent to be completely innate, others reported that they thought that talent was not innate at all: Answers to the question about the extent to which respondents believed that talent was innate ranged from 0 to 100%. Similarly, while some respondents considered all employees within their organization as talented, others did not consider a single person within their company as talented. These findings from organizational practice reflect the prevailing ambiguity about the construct talent within the scientific literature (Gallardo-Gallardo et al., 2013; Nijs et al., 2014).

In line with the framework of talent philosophies proposed by Meyers and van Woerkom (2014), we found that combinations of beliefs about the extent to which talent is innate on

the one hand and exclusive on the other can be clustered into four different talent philosophies—each occurring with nearly identical prevalence in our sample. More specifically, we found that HR managers either believe that talent is rare and innate (exclusive/stable philosophy), that talent is rare but can be developed (exclusive/developable philosophy), that talent is common and innate (inclusive/stable philosophy), or that talent is common and can be developed (inclusive/developable philosophy). Intuitively, one might assume that the two dimensions we used to construct the four philosophies are interrelated in such a way that a stronger belief in the possibility to develop talent would lead to a more inclusive understanding of the construct, and that, vice versa, a stronger belief in the innate nature of talent would lead to a more exclusive understanding. Our findings, however, challenge these intuitive assumptions by showing that the two dimensions are uncorrelated. Our results support the notion that HR managers can believe that only few people have the potential to develop talent (Altman, 1997), or that all people are born with certain talents or strengths (Peterson & Seligman, 2004).

We hypothesized that the four talent philosophies could be explained in part by an individual's implicit person theory (i.e., his or her fixed versus growth mindset; Dweck, 2012). Our results suggested that the two constructs are, indeed, related. We found that respondents in either the exclusive/developable or the inclusive/developable cluster were more likely to hold a growth mindset than respondents in the other two clusters, suggesting that holding an incremental person theory is related to the belief that talent is innate versus open to development, but not to the belief that talent is inclusive versus exclusive. The relationship between the two constructs can be explained by the fact that the incremental person theory covers personal ideas about the general human capacity to change, develop, and grow, or about the malleability of human qualities in general (Dweck, 2012). Supposedly, talent falls into the broad range of human qualities that are covered by incremental person theory. In contrast to our expectations, we did not find differences in the degree of incremental person theory held by respondents in the inclusive/developable and exclusive/developable clusters. While we reasoned that individuals who believe in everyone's capacity to develop talent would have a more pronounced growth mindset than individuals who believe that only some people can develop talent, it appears that the latter respondents still believe in everyone's ability to change and grow in a general way—they just don't believe that anyone can become exceptional.

The present study did not cover factors that might predict whether individuals hold the belief that talent is either inclusive or exclusive, but we do believe that literature on diversity and inclusion can inform this discussion in the future. It might, for instance, be argued that factors such as diversity beliefs, which capture individual beliefs regarding the positive or negative effect of diversity on work group functioning (van Knippenberg & Haslam, 2003), or inclusive organizational climates, in which all individuals are valued for who they are (Nishii, 2012) affect an individual's belief regarding the rareness of talent.

Furthermore, we tested three different hypotheses about the effect of an HR manager's talent philosophy on organizational practices with regard to talent management. In line with our expectations we found that HR managers who hold either an exclusive/developable or an exclusive/innate talent philosophy are more likely to indicate that their organization uses an exclusive definition of talent and that the organization makes use of workforce differentiation. These finding might be explained by either the influence of an HR manager on HR-related policies and practices (Paauwe, 2004), the influence of organizational context factors on values, norms, and, beliefs of the managers (Meglino & Ravlin, 1998), or on a perceptual bias on the side of the HR manager which causes him to interpret the actual organizational practice in line with his own values and ideas (Starbuck & Milliken, 1988). While our research design does not allow us to exclude any of these explanations, we do reason that an HR manager at least partly shapes practices with regard to human resources- or talent management according to his own beliefs and ideas (Hambrick & Mason, 1984; Paauwe, 2004). Future research should help clarify this matter.

Contrary to what we expected, we did not find relationships between the exclusive/developable and inclusive/developable clusters on the one hand, and the degree to which the organization relies on growth as opposed to foundational criteria for talent identification on the other. While these findings might be related to the measurement of the latter variable, one might also argue that HR managers do not always appropriately adjust talent identification procedures to the talent definition they are using. Prior research has shown that a majority of managers tend to rely on performance records to identify talented employees (Dries & Pepermans, 2008), but often do not give further thought to the question of whether performance is a good indicator for talent. Silzer and Church (2009a), for instance, criticized the common practice to identify potential based on current performance, because performance might simply reflect experience with the task at hand, and does not necessarily capture the ability to cope with future challenges.

In summary, our research results strongly supported the existence of four different talent philosophies, and partially supported their respective influence on talent-management approaches as implemented in organizational practice.

Limitations and Future Research

The research at hand is subject to three major limitations. First, we present results of cross-sectional research which does not allow drawing conclusions about cause and effect relationships. The question whether managerial beliefs and ideas influence organizational practices or whether organizational practices influence managerial beliefs and ideas cannot be conclusively answered by the results of this study. The data we presented is, however, feasible in light of the exploratory nature of our study, which aimed to gain initial insights into different talent philosophies and some of the variables they are related to. Second, the results of our study rely on single-source data. While it is appropriate to measure both

implicit person theory and talent philosophies at the level of the individual manager, other sources might be used in future research to measure organizational practices with regard to talent management. Ideally, both the perceptions of employees and other senior managers would have been measured. Third, while we did target HR directors or the most senior HR manager in an organization, the use of snowball sampling limits the control we had over the sampling procedure. As our final sample might include lower-level HR managers, we do not know for sure whether our respondents have the necessary power to influence decisions with regard to HR as we presumed in our theoretical framework. Based on certain demographic characteristics of our sample such as an average age of 59.56 years and an average experience in HR of 12.25 years, we can, however, assume that most of our respondents were indeed senior HR managers.

Future research should address the limitations mentioned above by making use of longitudinal designs in which both HR manager data and objective organizational data are collected over a period of at least one but preferably several years. Ideally, data would be collected before and after an HR manager is appointed in an organization, to gain insights into the causal directionality of influences. Moreover, future research might aim to gain insights into the links between talent philosophies and employee outcomes such as perceptions or attributions of HR practices, employee well-being, and engagement. Meyers and van Woerkom (2014) have, for instance, proposed that inclusive philosophies affect employees in a more favorable way than exclusive philosophies, but this hypothesis still remains to be investigated by means of a multi-level study. This multi-level study would ideally also include objectively measured organizational performance as an outcome variable in order to explore whether different talent philosophies affect organizations differently. Another valuable addition to future research might be to collect data on the talent philosophies of line managers instead of HR managers because literature on SHRM highlights that the responsibility for managing the workforce gets more and more devolved from the HR department to line managers (Becker & Huselid, 2006; Whittaker & Marchington, 2003).

Theoretical and Practical Implications

In response to recent theoretical papers in which the persisting ambiguity of the constructs talent and talent management was highlighted (Dries, 2013; Gallardo-Gallardo et al., 2013; Tansley, 2011), this paper aimed to shed light on the nature of these ambiguities in organizational practice. We found that HR managers from various organizations had divergent ideas about the degree to which talent is innate and the degree to which talent is exclusive, and it appears that these different ideas about talent are rooted in their general ideas and beliefs about people and human nature. Furthermore, we found that HR managers' ideas about talent, in particular about the rareness or exclusiveness of talent, were related to aspects of talent management in organizational practice such as the

organizational definition of talent and the degree of workforce differentiation. Consequently, we have reason to assume that the diversity of talent-management approaches that is found in practice (Collings & Mellahi, 2009; Lewis & Heckman, 2006) is a reflection of diverse individual ideas about talent, and not just an artifact of implementing talent management as the latest management fashion without giving further thought to it (Iles, Preece, et al., 2010). Since none of the beliefs about talent which we presented in this article can be considered 'wrong', and since there is no research evidence so far pointing out that different ideas about talent translate into different talent-management practices which, in turn, lead to differential effects on organizational performance, we interpret these results as a hint to start appreciating the diversity in the talent-management literature and in HR practice. In line with Boudreau (2013), we reason that the diversity in the literature as well as in practice should be embraced as a resource that can help to increase our understanding of talent management and the processes and outcomes it triggers.

CHAPTER 5

THE ADDED VALUE OF THE POSITIVE: A LITERATURE REVIEW OF POSITIVE PSYCHOLOGY INTERVENTIONS IN ORGANIZATIONS

ABSTRACT

This paper systematically reviews research investigating the effects of positive psychology interventions applied in the organizational context. We characterize a positive psychology intervention as any intentional activity or method that is based on (a) the cultivation of positive subjective experiences, (b) the building of positive individual traits, or (c) the building of civic virtue and positive institutions. A systematic literature search identified 15 studies that examined the effects of such an intervention in organizational contexts. Subsequent analyses of those studies revealed that positive psychology interventions seem to be a promising tool for enhancing employee well-being and performance. As a side-effect, positive psychology interventions also tend to diminish stress and burnout and to a lesser extent depression and anxiety. Implications of those findings for theory and praxis and recommendations for future research on positive psychology interventions in organizations are discussed.

Keywords: performance, positive psychology, positive psychology intervention, review, well-being

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Whereas psychology in the second half of the 20th century was mainly about repairing damage and curing diseases, we nowadays find a considerable amount of studies on human flourishing and developing positive qualities. This shift in psychologists' interest from repairing what is broken to nurturing what is best appeared around the turn of the century after the inaugural speech of Martin Seligman as president of the American Psychologist Association in 1998, and the publication of a highly cited article by Seligman and Csikszentmihalyi (2000). In this article, the authors characterize positive psychology as a "science of positive subjective experience, positive individual traits, and positive institutions" (Seligman & Csikszentmihalyi, 2000, p. 5). Since then the positive psychology movement has gained momentum and has also influenced the work of organizational and occupational psychologists. Most notably, two broader empirical research streams emerged parallel to positive psychology that both aim at producing positive individual and organizational outcomes: Positive organizational behavior (Luthans, 2002) and positive organizational scholarship (Cameron, Dutton, & Quinn, 2003).

Positive organizational behavior has been defined as "the study and application of positively oriented human resource strengths and psychological capacities that can be measured, developed, and effectively managed for performance improvement in today's workplace" (Luthans, 2002, p. 698). It has a strong focus on individual factors such as hope, optimism, resilience, and self-efficacy (Psychological Capital; Luthans, Youssef, & Avolio, 2007) and their contribution to individual flourishing. Positive organizational scholarship "is the study of that which is positive, flourishing, and life-giving in organizations" (Cameron & Caza, 2004, p. 731). It puts emphasis on generative dynamics that make organizations, organizational units, and organizational members flourish and thrive.

Another construct, that shares its core ideas with positive psychology and especially positive organizational scholarship is appreciative inquiry (Cooperrider & Srivastva, 1987), which has originally been developed as an organizational change instrument. "Appreciative inquiry is a constructive inquiry process that searches for everything that "gives life" to organizations, communities, and larger human systems when they are most alive, effective, creative and healthy in their interconnected ecology of relationships" (Cooperrider & Avital, 2004, p. xii). Even though appreciative inquiry was introduced about a decade earlier, it experienced an extensive boost parallel to the growing interest in positive psychology starting from the year 2000 onwards (Cooperrider & Whitney, 2005).

About a decade after the emergence of positive psychology, this paper aims at providing a first review of intervention studies in the field of positive organizational scholarship, positive organizational behavior, and appreciative inquiry thereby offering important contributions to theory and praxis. It seeks to shed light on the theoretical links between positive psychology at the workplace and individual and organizational outcomes proposed by positive organizational scholarship, positive organizational behavior, and appreciative inquiry

scholars. In other words, we strive to find out whether positive psychology adds value to organizations and businesses. Furthermore, this paper indicates avenues for future research and offers important insights for practitioners by outlining the effects of positive psychology interventions in today's working environment. In the following paragraph we will further illustrate the research question of this article.

SCOPE OF THE REVIEW

A common characteristic of appreciative inquiry, positive organizational scholarship, and positive organizational behavior is the assumption that positive psychology applied to the workplace leads to highly valued outcomes for both the individual and the organization: the overall aim is individual and organizational flourishing (Cameron & Caza, 2004). According to this belief, organizations might gain a lot from acting upon positive psychology principles when it comes to the management of their personnel. Unfortunately, empirical evidence supporting the supposed beneficial effects for employees and organizations is still sparse which inhibits practitioners to implement positive psychology practices (Cameron, Mora, Leutscher, & Calarco, 2011).

Support for the proposition of individual flourishing due to positive psychology interventions can be derived from a range of studies carried out with student and clinical samples. In the most extensive review to date, Sin and Lyubomirsky (2009) summarized results from 51 studies that investigated the effects of positive psychology interventions on well-being and depression of diverse samples (depressed and/or non-depressed individuals, students, adults, elderly, etc.). Results of their meta-analysis revealed that positive psychology interventions have a favorable effect on well-being and a mitigating effect on depression. The favorable effect of positive psychology interventions on well-being was also supported by three already existing reviews which focused exclusively on very specific interventions: Wood, Froh, and Geraghty (2010) reviewed 12 studies investigating the effects of gratitude interventions on well-being; Mitchell, Vella-Brodrick, and Klein (2010) summarized five studies on the effects of online positive psychology interventions on well-being and illness; and Mazzucchelli, Kane, and Rees (2010) conducted a meta-analysis on 20 studies that investigated the effects of behavioral activation interventions on well-being. None of those reviews made specific demands regarding the study samples leading to the inclusion of studies with depressed or non-depressed children, adolescents, adults, and elderly people.

To the best of our knowledge, there is, however, no existent literature review that focuses on positive psychology interventions in organizational settings only and analyzes outcomes other than well-being or mental illness (e.g., depression, anxiety, stress). Therefore, we present a systematic literature review that summarizes the findings of empirical studies examining the effects of positive psychology interventions in organizations. We considered it useful to review studies that are carried out with organizational samples only because we

expect them to differ from clinical as well as from student samples for the following three reasons.

First, organizational samples are expected to score significantly lower on measures of psychopathology and mental illness than clinical samples. As it has been found that depressed people benefit more from positive psychology interventions (Sin & Lyubomirsky, 2009), it might be that positive psychology interventions achieve weaker or even no effects in organizational settings. Second, a second-order meta-analysis comparing social science research data for college students and nonstudents (adults) has shown that responses of students differ from nonstudents, yet not in a systematic way (Peterson, 2001). Third, another meta-analysis has shown that there are significant age differences regarding the effectiveness of several psychotherapeutic interventions (Barak, Hen, Boniel-Nissim, & Shapira, 2008).

For these reasons, we felt the need to provide a clear overview of what positive psychology has to offer for organizations and working adults, so that practitioners and organizational researchers who deal with questions concerning employees do not draw wrong conclusions out of research that is directed at different populations. Furthermore, we expand the work of Sin and Lyubomirsky (2009), Wood et al. (2010), Mitchell et al. (2010), and Mazzucchelli et al. (2010), who focused on well-being only (Mazzucchelli et al., 2010; Wood et al., 2010), on well-being and depression (Sin & Lyubomirsky, 2009), or on well-being and illness (Mitchell et al., 2010) as the only outcome measures, by taking into account every possible outcome that has been measured in positive psychology intervention studies. This is important because outcomes such as performance, work/job satisfaction, leadership skills, and work-life balance might be of particular interest to organizations. We also expanded the work of Wood et al. (2010), Mitchell et al. (2010), and Mazzucchelli et al. (2010) in that we did not limit the review to one distinct form of intervention, but included all forms of positive psychology interventions that have been applied to the organizational context.

In summary, we targeted at creating a general overview of interventions that are applicable in organizations and the diverse outcomes they produce. In other words, the overall aim of this study was to find out whether there is such a thing as the added value of the positive in its widest sense in organizational contexts. Hence, the following research question emerged: *What are the benefits of positive psychology interventions when applied to organizations and through what mechanisms do those interventions operate?*

POSITIVE PSYCHOLOGY AND INTERVENTIONS

Seligman and Csikszentmihalyi (2000) described positive psychology as follows:

> The field of positive psychology at the subjective level is about valued subjective experiences: well-being, contentment, and satisfaction (in the past); hope and

> optimism (for the future); and flow and happiness (in the present). At the individual level, it is about positive individual traits: the capacity for love and vocation, courage, interpersonal skill, aesthetic sensibility, perseverance, forgiveness, originality, future mindedness, spirituality, high talent, and wisdom. At the group level, it is about the civic virtues and the institutions that move individuals toward better citizenship: responsibility, nurturance, altruism, civility, moderation, tolerance, and work ethic. (p. 5)

In line with this definition, a positive psychology intervention may be understood as any intentional activity or method (such as training, coaching, etc.) based on (a) the cultivation of valued subjective experiences, (b) the building of positive individual traits, or (c) the building of civic virtue and positive institutions. Under part (a) of the definition falls any intervention that understands positive subjective experiences as part of the intervention method (e.g., remembering sacred moments) and not just as a byproduct that happens to appear in consequence of the intervention. Part (b) of the definition encompasses interventions that aim at identifying, developing, broadening, and/or using valued individual traits or trait-like constructs (e.g. character strengths) and, finally, part (c) encompasses any intervention that aims at identifying, developing, broadening, and/or putting to practice valued characteristics of organizations or organizational subgroups.

Specific Positive Psychology Interventions

In the recent literature, researchers report on a wide range of positive psychology interventions that have mainly been tested in clinical or in student samples. In a meta-analysis of 51 positive psychology interventions aiming to enhance well-being and mitigate depression, one can find gratitude interventions, positive writing, and mindfulness interventions amongst the most occurring ones (Sin & Lyubomirsky, 2009). All three types can be seen as interventions aiming at the amplification of positive emotions and would therefore belong to part (a) of our definition.

Participants in gratitude interventions, for example, are asked to write down things they feel grateful for on a daily or weekly basis in order to directly increase experiences of state gratitude (Emmons & McCullough, 2003). Gratitude, in turn, has been assumed to counteract the hedonic adaptation to positive events and hence to prolong the positive feelings associated with them (Lyubomirsky, Sheldon, & Schkade, 2005; Watkins, 2004). The broaden-and-build theory (Fredrickson, 1998, 2001) explains why those feelings are worth multiplying by suggesting that positive emotions lead to broadened arrows of thoughts and actions that facilitate the building of important personal resources (social, physiological, and cognitive resources). It has furthermore been proposed that facilitating positive emotions can trigger positive upward spirals, in which the created personal resources lead to the experience of positive emotions, which, in turn, will produce even more personal resources, and so on (Fredrickson, 2003).

Interventions to increase positive psychological capital (Luthans & Youssef, 2004), which is state-like per definition, but more stable than fluctuating affective states, also fall under the first point of the abovementioned definition of positive psychology interventions. Psychological capital consists of the four constructs self-efficacy, optimism, hope, and resilience (Luthans & Youssef, et al., 2007), and those four constructs taken together are assumed to produce synergy effects leading to highest efficiency. Psychological capital makes individuals put extra effort in the task they have to accomplish, motivates them to do so by letting them expect positive results, enables them to generate various solutions if problems occur, and makes individuals cope well in case of eventual setbacks (Luthans, Avey, Avolio, & Peterson, 2010).

Part (b) of the positive psychology intervention definition comprises interventions that identify, develop, broaden, or use positive individual traits or trait-like characteristics. Interventions that focus on individual strengths fall under this part of the definition; e.g., reflecting on times when a person was at his/her best and the strengths he/she used then, identifying signature strengths, or a combination of identifying and using strengths in a new way (Seligman et al., 2005). Another example is the reflected best self exercise that helps people learn more about their unique strengths and talents by asking people in their surroundings to provide examples of moments when they were at their best (Roberts, Dutton, Spreitzer, Heaphy, & Quinn, 2005). It has been argued that working with one's strengths is fulfilling and engaging, and induces a feeling of acting in an authentic manner and being true to oneself (Peterson & Seligman, 2004). For those reasons, using strengths should contribute to enhanced well-being. As the positive link between well-being/happiness and performance is well-established (for a meta-analysis see: Kaplan, Bradley, Luchman, & Haynes, 2009), one may also expect performance gains through interventions focusing on strengths.

An intervention that is not clearly classifiable as belonging to the first or the second part of the definition is solution-focused coaching (Grant, 2003). This form of coaching focuses on strengths development and solution generation instead of on problem analysis (Grant, 2003), and would, therefore, be categorized as belonging to part (b) of the definition. At the same time, the coaching process makes use of elements that are similar to psychological capital interventions: it comprises goal setting, which is a method to develop hope (Luthans & Youssef, 2004), and motivates people through increasing self-efficacy (Grant, Curtayne, & Burton, 2009).

Interventions which capitalize on the identification, development, broadening, and use of valued organizational characteristics fall under part (c) of our definition. An example is the appreciative inquiry approach that identifies an organization's life-giving forces and core strengths and uses them in a goal-directed manner. In more detail, the appreciative inquiry approach focuses attention on the positive change core of an organization by collecting

stories of organizational successes, developing ideas for a positive future, designing an organization which makes optimal use of the strengths at hand, and setting up action plans for becoming such an organization (Cooperrider & Whitney, 2005). Thereby, it differentiates itself from more diagnostic or problem-oriented change initiatives where processes of negation, mutual criticism, and spiraling problem diagnosis are run through (Cooperrider & Whitney, 2005). Instead, it creates high motivation, high spirit, and cooperation amongst organizational members, as well as a positive and appreciative climate (Whitney & Cooperrider, 1998).

For this literature review, we systematically searched for studies in organizational settings investigating one of the interventions mentioned within this paragraph or similar interventions fitting our definition. Moreover, we were interested in any kind of outcome variables measured in those studies. We hypothesize that positive psychology interventions lead to a variety of valued outcome variables, like enhanced well-being at the individual and enhanced performance at the organizational level.

METHOD

Selection Criteria

As research on positive psychology interventions in organizations still is in its infancy, we did not want to focus on one specific intervention only. Rather, we want to provide an overall picture of empirical studies investigating the effectiveness of any form of organizational intervention that is based on positive psychology. Nonetheless, the abovementioned research question dictates five criteria for inclusion in our research.

Studies were included if they provide (1) an experimental or quasi-experimental investigation of a positive psychology intervention tested in a working context. Above that, studies were only included if they report pre- and post-intervention measures of (2a) individual, (2b) team-level, or (2c) organizational outcomes. Taken together, criteria one and two were applied to make sure that the studies can draw valid conclusions about cause and effect relationships. Third, studies to be included had to (3) either use samples that were drawn from an organizational context, or convenience samples of working adults that did not show above average levels of clinical symptoms. This criterion is necessary for the purpose of our study, because we aim to gain insight into processes triggered by positive psychology in one particular context: the work context. Fourth (4), studies to be included had to be published during the time span from 2000 until 2011 because positive psychology only gained momentum from the year 2000 onwards. We do acknowledge that there are studies falling under our definition of positive psychology interventions that have been published before this date, but since those studies cannot refer to positive psychology or related movements in any way, the decision to widen the time frame would result in a diffuse and very broad search. We felt that by loosening this criterion, we would run the risk of not doing justice to

the requirement of providing a thorough and complete overview of literature falling under the selection criteria any more. Finally, we limited the search to articles (5) written in English and to articles that appeared in peer-reviewed journals, serving as a minimum quality standard.

Search Strategy

In order to select adequate search terms, we scanned our own endnote database for articles meeting our selection criteria in a first step. We then inspected the selected articles and gathered reoccurring key terms. Based on a list of those key terms, the final search terms were developed in a second step. Those comprised the stand-alone terms "positive organizational behavior", "positive organizational scholarship", "appreciative inquiry", "strengths coaching", "solution-focused coaching", "strengths approach", "strengths-based approach", and "strengths use". Beyond, we used combinations of "positive psychology" or "strengths-based" as first search term, and either "intervention", "organization", "workplace", "coaching", or "employee" as second search term.

In the next step, those search terms were entered into three electronic databases: PsychINFO, ISI Web of Science, and ABI/Inform. Search in those electronic databases was limited by application of several advanced search criteria if possible, such as limiting the time span from 2000-2011, and searching for articles containing empirical work, written in English, and published in peer-reviewed journals only. This initial search resulted in 713 hits in PsychINFO, 436 hits in Web of Science, and 290 hits in ABI/Inform (total of 1439 hits). Subsequently, the abstracts of the extracted articles were scanned by the authors. Under application of the selection criteria mentioned above, 1322 articles were excluded due to misfit. The two main reasons for exclusion were that studies did not present experimental or quasi-experimental research, or used a sample that was not adequate for the purpose of our review, with the bulk of research conducted with adolescent, student, or clinical samples. Concerning studies on appreciative inquiry, it moreover was noticeable that the majority of published articles describe one or several case studies. This procedure led to 117 remaining articles that were examined in greater detail by reading the full-text version. Finally, a total of 13 articles remained that met all the selection criteria.

In order to make sure that no important articles on the subject were omitted, references of the final articles were checked in a last step and a call for possible important papers was placed on a well-known positive organizational scholarship website. This yielded an additional two studies that met our selection criteria and increased the total number of included studies to 15. One of these studies (Avey, Avolio, & Luthans, 2011) could not be found with our search terms because it had not been published yet, and the other (Abbott, Klein, Hamilton, & Rosenthal, 2009) because it does not refer to positive psychology, positive organizational behavior, or positive organizational scholarship.

Analysis Strategy

The research question of this article consists of two parts asking about (i) outcomes of positive psychology interventions and (ii) mechanisms through which they work. Therefore, we initially created a list of all outcome measures that were used in the studies and noted how many of the studies used them, and how many and which studies found a significant effect of the intervention on the outcome (i). Thereafter, outcome measures were categorized into broader categories, and findings were summarized across all studies. To answer the second part of the research question (ii), we examined whether studies investigated mediating or moderating variables and if so, what the findings were.

ANALYSIS AND SYNTHESIS

The search resulted in 15 articles with a total number of 1540 participants (sample sizes ranging from *N* = 30 to *N* = 364). An overview of the articles structured according to our three-part definition of positive psychology interventions can be found in Table 1.

Research has been conducted in a variety of organizations, operating in the sectors education, healthcare, IT, resources, manufacturing, and government. Two studies used convenient samples of working adults or managers from different organizations and different sectors. The included studies covered a broad range of interventions. Two successional studies examined the effects of loving-kindness meditation (Cohn & Fredrickson, 2010; Fredrickson, Cohn, Coffey, Pek, & Finkel, 2008), three studies focused on programs to enhance resilience (Abbott et al., 2009; Liossis, Shochet, Millear, & Biggs, 2009; Millear, Liossis, Shochet, Biggs, & Donald, 2008), three studies tested interventions to enhance positive psychological capital (Demerouti, van Eeuwijk, Snelder, & Wild, 2011; Luthans et al., 2010; Luthans, Avey, & Patera, 2008), one study tested a gratitude intervention (Chan, 2010a), and another two studies experimentally examined the effects of solution-focused coaching (Grant et al., 2009; Grant, Green, & Rynsaardt, 2010). Finally, three studies used an experimental approach to determine the impact of appreciative inquiry approaches (Peelle, 2006; Ruhe et al., 2011; Sekerka, Brumbaugh, Rosa, & Cooperrider, 2006) and one study experimentally investigated the effects of leader positive psychological capital (Avey et al., 2011)[1]. Three out of these 15 studies evaluated the effect of web-based interventions (Abbott et al., 2009; Chan, 2010a; Luthans et al., 2008).

[1] Although this study does not satisfy the criterion of using pre- and post-intervention measures, it was included in the review because the specific design of the study did not allow for the measurement of the outcome variables quantity and quality of solutions prior to the intervention.

Table 1

Relevant Studies on Positive Psychology Interventions in Organizations

Study		Sample	Intervention	Control Conditions	Assessment	Measures	Outcomes
(a)	Fredrickson et al. (2008)	IT company	Loving-Kindness Meditation 9 weeks	Waitlist control group	Pre, post, and daily emotion measures	mDES Cognitive, physical, psychological and social resources SWLS CES-DM DRM	Positive emotions (+), negative emotions (ns) 9 out of 18 resources (+) (+) (-) Positive emotions (+)
(a)	Cohn & Fredrickson (2010) – *follow up of previous study*	IT company	Loving-Kindness Meditation 9 weeks	Waitlist control group	15 months follow up	Cognitive, physical, psychological, and social resources mDES	Initial gains in the 9 resources (see previous study) were maintained Positive emotions (+), if meditation was continued
(a)	Abbott et al (2009)	Australian sales managers	Resilience Online Program (ROL)	Waitlist control group	Pre, post	AHI WHOQOL-BREF DASS-21 Performance	(+) but no difference between ROL and control group (ns) (ns) (ns)
(a)	Millear et al. (2008)	Resource sector company	Promoting Adult Resilience Program 11 weeks	Non-intervention comparison group of university alumni	Pre, post, 9 months	DASS-21 SWLS PWB (Ryff's Scales) Work-life balance Work life fit Job satisfaction CSE Social Skills Scale	Depression (-), stress (-), anxiety (-) (ns) (ns) (ns) (+) (ns) (+) (ns)

Table 1 continued

Study		Sample	Intervention	Control Conditions	Assessment	Measures	Outcomes
(a)	Liossis et al. (2009)	Government organization	Promoting Adult Resilience Program 7 weeks	Non-intervention comparison group of university alumni	Pre, post, 5 months	DASS-21	Depression (ns), stress (-), anxiety (ns)
						MBI-GS (emotional exhaustion)	(-)
						PWB (Ryff's Scales)	(as)
						Work vigor (UWES)	(+)
						Work satisfaction	(+)
						Family satisfaction	(+)
						Work-life balance	(+)
						Work life fit	(+)
						CSE	(+)
						LOT-R	Optimism (+)
						Work-family spillover scale	Negative spillover (-), positive spillover (ns)
(a)	Luthans et al. (2008)	Working adults, diverse sectors	Web-based intervention to develop positive psychological capital 2 x 45 min	Decision-making intervention	Pre, post	PCQ	Psychological capital (+)
(a)	Luthans et al. (2010)	Managers, diverse sectors	Intervention to increase positive psychological capital 2h	None	Pre, post	PsyCap	(+)
						Performance (self-rated)	(+)
						Performance (supervisor-rated)	(+)
(a)	Demerouti et al. (2010)	Working adults	Personal effectiveness training	None	Pre, post	Assertiveness (self-rated)	(+)
						PsyCap (self-rated)	(+)
						Assertiveness (other-rated)	(+)
						PsyCap (other-rated)	(+)
(a)	Chan (2010)	Chinese teachers	Gratitude Intervention (Count your blessings) 8 weeks	No control group, intervention group split into high/ low trait gratitude	Pre, post	GAC (state)	(+) only for low gratitude group
						SWLS	(+) only for low gratitude group
						PANAS	PA (+), NA (ns)

Table 1 continued

Study		Sample	Intervention	Control Conditions	Assessment	Measures	Outcomes
(a) (b)	Grant et al. (2009)	Executives, public health agency	Cognitive-behavioral, solution-focused coaching	Waitlist control group	Pre, post	GAS CHS (Resilience) DASS-21 WWBI	(+) (+) Depression(-), anxiety (ns), stress (ns) (+)
(a) (b)	Grant et al. (2010)	High school teachers	Cognitive-behavioral, solution-focused coaching 20 weeks	Waitlist control group	Pre, post	GAS (work) GAS (personal) CHS WWBI DASS-21 LSI – self-rated LSI – other-rated	(+) (+) Resilience(+) (+) Depression (ns), anxiety (ns), stress (-) Constructive leadership (+), passive/defensive (-), aggressive/defensive (-) (ns)
(c)	Avey et al. (2011)	Engineers, aerospace firm	High conveyed leader positivity (hope, optimism, confidence, resilience)	Low conveyed leader positivity	Post	PCQ Performance – quantity Performance – quality	(+) (+) mediated by PCQ (+) mediated by PCQ
(c)	Ruhe et al. (2011)	Primary care practices (practice level)	AI as a quality improvement tool	Waitlist control group	Baseline, 18 months (3 scores from 6 months intervals combined)	Preventive service delivery rates Screening Counseling Immunization	 (ns) (ns) (ns)

Table 1 continued

Study		Sample	Intervention	Control Conditions	Assessment	Measures	Outcomes
(c)	Peelle (2006)	6 cross-funct. teams, manufacturing organization	AI as approach to perform a team task	Creative problem solving	Pre, mid, posttest	Group potency Group identification	(+) at posttest (+) at mid-test
(c)	Sekerka et al (2006)	Government administered medical center	Discovery phase of AI / self-focus	Discovery phase of AI / other focus; Problem identification / self focus; Problem identification / other focus	post	PANAS Self-concept Task involvement Attitude towards organization Empathy Empowerment Creativity Collaboration Strategic orientation	PA (+), NA (ns) Positive self-view (+), negative self-view (-) (+) only for men (ns) (ns) (ns) (ns) (+) for men; (-) for women (ns)

Note. (a), (b), and (c) refer to the kind of positive psychology intervention according to the definition we gave. (+) = significant increase, (-) = significant decrease, (ns) = not significant, (as) = approaches significance. AHI = Authentic Happiness Inventory; CES-DM = Center for Epidemiological Studies—Depression Measure; CHS = Cognitive Hardiness Scale; CSE = Coping Self-Efficacy; DASS-21 = Depression Anxiety Stress Scale; DRM = Day Reconstruction Method; GAC = Gratitude Adjectives Checklist; GAS = Goal Attainment Scaling; GQ-6 = Gratitude Questionnaire; LOT-R = Life Orientation Test – Revised; LSI = Human Synergistics Life Styles Inventory; MBI-GS = Maslach Burnout Inventory; mDES = Modified Differential Emotions Scale; OHS = Orientation to Happiness Questionnaire; PANAS = Positive Affect Negative Affect Schedule; PCQ = PsyCap Questionnaire; PsyCap = Positive Psychological Capital; PWB = Psychological Well-Being; SWLS = Satisfaction with Life Scale; UWES = Utrecht Work Engagement Scale; WHOQOL-BREF = World Health Organization Quality of Life; WWBI = Workplace Well-Being Index.

The Added Value of the Positive

In order to establish whether positive psychology interventions provide added value for organizations, we focused on the outcome measures that were examined in the reviewed studies, and summarized results for categories of outcomes if possible. In a second step, we then examined operating mechanisms that were investigated by the reviewed studies.

The most consistent finding throughout the 15 studies under examination was the positive impact of a variety of interventions on well-being. It is striking, that 13 out of 15 (87%) studies reported effects on at least one well-being variable. More specifically, within those 13 studies, we found 29 statistical tests to analyze the effects of the respective intervention on some measure of well-being (e.g., positive emotions, optimism, resilience, psychological capital, satisfaction). Out of those 29 tests, then, 25 found a significant positive impact of the intervention on the respective well-being measure.

When taking a closer look at the different well-being measures, it appears that the interventions advance positive subjective states that are directed at the future or at the present without exception (cf. definition of positive psychology). Every study that included one of the variables happiness, positive mood, positive emotions, vigor, positive self-view (present oriented), or hope, optimism, self-efficacy, or resilience (future-oriented), found increases due to positive psychology interventions. Hope, optimism, self-efficacy, resilience, and assertiveness were even found to be increased when rated by a second person (Demerouti et al., 2011).

Only for variables with a past orientation some non-significant results were found. Out of two studies investigating psychological well-being and work satisfaction in rather small samples (Liossis et al., 2009; Millear et al., 2008), only the former one found an effect that approached significance for well-being and a significant, positive effect for work satisfaction. Similarly, out of three studies measuring satisfaction with life, two found increased levels due to the intervention (Chan, 2010a; Fredrickson et al., 2008), whereas one failed to report significant results (Millear et al., 2008).

Results were more ambiguous for negative emotions and negative emotional states. All four tests, which were run to examine whether positive psychology interventions decrease levels of negative emotions, failed to report significant impacts (Chan, 2010a; Cohn & Fredrickson, 2010; Fredrickson et al., 2008; Sekerka et al., 2006). Out of five studies that included the Depression Anxiety Stress Scale (DASS-21) (Abbott et al., 2009; Grant et al., 2009; Grant et al., 2010; Liossis et al., 2009; Millear et al., 2008), three studies found significant decreases in stress, two found significant decreases in depression, and one study found a significant decrease in anxiety; thus, only six out of 15 empirical tests were supportive of a mitigating effect. In contrast, Fredrickson and colleagues (2008) found decreases in depression measured by the Center for Epidemiological Studies – Depression Scale. Similarly, decreases

in the burnout component exhaustion were confirmed in the study by Liossis et al. (2009), and decreases in a negative self-view were found by Sekerka et al. (2006).

Only four out of 15 studies investigated changes in performance levels due to participation in a positive intervention (Abbott et al., 2009; Avey et al., 2011; Luthans et al., 2010; Ruhe et al., 2011). However, no significant increases were found for the gross margin and the volume of sold products (both as percentage of targets set) of sales managers (Abbott et al., 2009) and the service delivery rate of primary care practices (Ruhe et al., 2011). In contrast, the study of Luthans et al. (2010) reported significant increases in self- and supervisor-rated performance after a psychological capital intervention. Likewise, the study of Avey et al. (2011) found that leader positivity significantly enhanced the quantity and quality of solutions to a problem that employees generated; this link was found to be mediated by increases in employee positivity (measured as psychological capital).

Other issues that were investigated concerned effects of positive interventions on work-life and work-family topics (Liossis et al., 2009; Millear et al., 2008). Both studies investigating the effects of the Promoting Adult Resilience Program found a positive influence on work-life fit, but only the more recent study (Liossis et al., 2009) could detect increases in work-life balance. It was also shown that negative work-family and family-work spillover was reduced, whereas positive spillover between both life domains appeared to be unaffected. Another variable concerned with the social context, social skills, was also not significantly altered by the Promoting Adult Resilience program (Millear et al., 2008). In contrast to this finding, Fredrickson et al. (2008) and Cohn and Fredrickson (2010) found significant gains in social, cognitive, psychological, and physiological resources that were even maintained 15 months after the initial intervention.

Grant et al. (2010) were the only scholars who investigated effects on leadership skills. In their study, solution-focused coaching led to significant improvements in self-rated leadership-skills of teachers, whereas other-rated leadership-skills remained unaffected. Solution focused coaching also proved to be useful to enhance goal attainment, no matter whether goals concerned personal or working life (Grant et al., 2009; Grant et al., 2010).

Furthermore, Sekerka et al. (2006) rated essays, which participants wrote after participating in a diagnostic or an appreciative inquiry intervention, on the dimensions attitude towards organization, empowerment, empathy, collaboration, task involvement, creativity, and long-term strategic orientation. They found out that appreciative inquiry triggered men to show greater task involvement and creativity. Women, however, were found to be less creative in the appreciative inquiry condition than in the diagnostic condition. Finally, the only study that investigated outcomes at the group-level (Peelle, 2006) found increases in group identification and estimates of group potency when using an appreciative approach to perform a team-task.

Operating Mechanisms

One of three studies explicitly testing operating mechanisms was the study on the effects of loving-kindness meditation conducted by Fredrickson et al. (2008) in an IT company. In this study, the experimental condition (loving-kindness meditation vs. waitlist control group) and the time spend meditating predicted increases in daily positive emotions over the 9-week intervention period which, in turn, significantly related to increases in 9 out of 18 personal resources (cognitive, psychological, and physiological) at the post-test. Increases in resources, finally, predicted enhancements in life satisfaction also measured at the post-test. The authors interpreted these findings as support of the build hypothesis which "holds that positive emotions set people on trajectories of growth that, over time, build consequential personal resources" (Fredrickson et al., 2008, p. 1046). The build hypothesis is one significant component of the broaden-and-build theory of positive emotions (Fredrickson, 1998, 2000).

In the second study, Avey et al. (2011) concluded that the relationship between leader positivity (leader psychological capital) and employee performance was mediated by increases in employee psychological capital. This means that positivity of a leader can rub off on his or her employees causing them to perform better.

The third study focused on moderating mechanisms (Sekerka et al., 2006) and made use of a 2 x 2 x 2 x 2 design in order to test the effectiveness of different change initiatives when working in pairs. The authors manipulated the orientation of the intervention (appreciative inquiry vs. diagnostic/problem-focused approach) as well as the responsible agent to enact the change (self as change agent (typical of appreciative inquiry) vs. other people as change agent). Furthermore, they assessed the gender of participants (male vs. female) and whether the participants collaborated with a person of the same or of the opposite sex (dyad: same vs. mixed) in order to test the moderating effects of gender and dyad.

Sekerka et al. (2006) revealed that applying an appreciative inquiry approach led to more positive emotions for people in mixed gender dyads. Moreover, subject gender was found to moderate the effects of appreciative inquiry on task involvement and creativity. Whereas women were eagerly involved under both the appreciative inquiry and the diagnostic condition, men were more involved when engaging in an appreciative inquiry task. In terms of creativity, men proved to be most creative in the appreciative inquiry condition, whereas women were least creative in this condition.

Although not explicitly testing for moderation, another study found hints for lack of positive disposition as a possible moderator of the relation between an intervention aimed at cultivating gratitude and outcome variables (Chan, 2010a). When splitting up the sample in two parts—one with individuals with a high disposition to experience gratitude and one with individuals with a low gratitude disposition—, it appeared that positive effects on state

gratitude and life satisfaction could only be found for the group scoring low on this positive trait variable.

DISCUSSION

To our knowledge, this paper presents the first systematic review that summarizes findings of positive psychology intervention studies in organizational contexts. It aimed at drawing a clear picture of the added value of positive psychology interventions in organizations, and sought to uncover mechanisms through which those interventions might work within this context.

The main finding of the review is that positive psychology interventions in the working context consistently enhance employee well-being, which is a crucial finding for organizations by reason of the diverse favorable effects of happiness. Happy employees are, for instance, less likely to leave the organization (Griffeth, Hom, & Gaertner, 2000). Furthermore, research on the broaden-and-build theory of positive emotions has found that happiness enhances creativity (Fredrickson, 2003) and facilitates the building of cognitive, physical, and social resources (Cohn & Fredrickson, 2010; Fredrickson et al., 2008). Finally, a meta-analysis testing the happy-productive worker thesis (Cropanzano & Wright, 2001) has shown that happy employees are also more likely to be productive employees (Kaplan et al., 2009), which might be especially evident within research that conceptualizes happiness as psychological well-being or the absence of negative and the presence of positive affect (Wright & Cropanzano, 2004).

A second and more ambiguous finding, we want to emphasize here, regards the relationship between positive psychology interventions and performance. This link has been investigated by four studies, out of which only two found confirming evidence for the favorable effect of positive psychology interventions. Avey et al. (2011) discovered that positive leadership leads to better performance through a process of enhancing employee positivity, and Luthans et al. (2010) detected that even very short interventions of two hours, which were directed at enhancing positive psychological capital, could lead to significant improvements in self- and supervisor-rated individual performance. These findings are in line with a theoretical model by Cameron et al. (2011) assuming that positive practices at work are linked to positive affect of workers which influences positive individual behavior and finally organizational effectiveness.

By contrast, no performance improvements were detected in one study on an appreciative inquiry intervention (Ruhe et al., 2011), and in another one testing an intervention that fosters resilience (Abbott et al., 2009). One reason for not finding an effect might be the limited sample sizes in both studies undermining the statistical power to detect an effect might there be one. Moreover, in case of the appreciative inquiry study, results could have been flawed by the pressure to include the interventions into busy working days which

resulted in shortenings of important appreciative inquiry circle elements. In case of the resilience study, one might presume that increases in resilience as one element of psychological capital alone fall short of producing the synergy effects that occur when hope, optimism, self-efficacy, and resilience interact, and that are believed to cause high individual effectivity (Luthans, Avolio, Avey, & Norman, 2007).

A final set of outcomes we want to give some consideration in this discussion section are negatively tuned emotional states and state-like variables such as anxiety, burnout, depression, and stress. Results regarding those variables are ambiguous, but should not be overemphasized due to two important reasons. First, it must be kept in mind that positive psychology interventions are not explicitly designed to treat mental illness or deficiencies; they are designed to build positive qualities (Sin & Lyubomirsky, 2009). Therefore, whatever effect they might achieve on the former should rather be seen as a positive side effect of initiatives that aim at something else, or as something they offer above their positive effects on happiness and well-being. Second, one might assume that employee populations score rather low on measures of mental deficiencies or pathology, and that those measures are meant to detect deviations from normal or average conditions in one direction only (the direction of pathology). When it comes to mentally healthy people, it is therefore possible that a statistical floor effect will prevent small changes from being detected.

To summarize, the evidence available so far points out that positive psychology interventions are a promising tool for enhancing well-being and, next to that, probably also for enhancing performance. Although only two out of four studies could corroborate the positive effect of positive psychology interventions on performance, the existence of this link is likely, not least because of the favorable influence of those interventions on well-being and the available evidence on the happy-productive worker thesis (Cropanzano & Wright, 2001). As a positive side effect, positive psychology interventions might alleviate stress, depression, burnout, and anxiety of employees.

When contemplating the second part of the research question asking for possible mediating or moderating mechanisms, we found hints that fluctuating states like emotions or state-like constructs such as psychological capital act as possible mediators in the relationship between positive psychology interventions and diverse outcomes (Avey et al., 2011; Fredrickson et al., 2008), whereas more stable trait-like constructs seem to moderate the relationship. Within the present review we found evidence suggesting that rather negative emotional traits moderate the effects of positive psychology interventions (Chan, 2010a). This suggested effect is in accordance with studies on positive psychology interventions in other contexts (Froh, Kashdan, Ozimkowski, & Miller, 2009; Mongrain, Chin, & Shapira, 2010; Sin & Lyubomirsky, 2009). Rather unhappy people - may they score higher on depression or anxious attachment, or lower on positive affectivity or gratitude - seem to benefit more from

positive psychology interventions. This would qualify those interventions as a useful tool to make organizational "problem children" catch up with their more happy peers.

The findings we present here are at first glance similar to findings of earlier reviews of the outcomes of positive psychology interventions; the most extensive of these reviews has been the meta-analysis by Sin and Lyubomirsky (2009) in which the results of 51 studies investigating the effects of positive psychology interventions on individual well-being and depression were statistically summarized. Similar to the results of our review, the authors found support for the hypothesized favorable effect on well-being as well as for the mitigating effect on depression. Due to their limitation to those two outcome variables, Sin and Lyubomirsky (2009) do not provide us with any information about effects on performance or other outcome measures. We considered it essential to expand on their work and provide a more complete review of all investigated outcome measures because a wide range of outcomes are of interest to organizations. More specifically, the Sin and Lyubomirsky (2009) review focuses on individual level outcomes only, whilst the multi-level nature of organizations would require the investigation of outcomes at the individual, team, department, and organization level (Rousseau, 1985).

Nonetheless, although we had the ambition to cover outcomes at multiple levels, we could only report the findings of one study that investigated changes in the service delivery rate of primary care practices as an organizational-level variable (Ruhe et al., 2011). The study concluded that the service-delivery rate had not significantly improved after an appreciative inquiry intervention, which might be explained in the light of the multi-dimensional, conceptual framework by Cameron et al. (2011). This framework reasons that positive practices influence individual positive affect, which influences positive individual behavior, which eventually translates into changes in organizational effectiveness. Considering its position at the end of a chain of effects, it might be argued that enhancing organizational effectiveness is harder than enhancing positive individual behavior, or might simply take longer. Besides, we noted that two more studies made use of an intervention consisting of a team task (Peelle, 2006) or a task for two people (Sekerka et al., 2006), but did not report group level findings. In summary, we can therefore conclude that the available literature on positive psychology interventions in organizations almost exclusively investigated individual-level dependent variables, which represents an important shortcoming of the literature to date.

Another critical difference between the review that we carried out and the meta-analysis by Sin and Lyubomirsky (2009) concerned the samples that the included studies used and their respective consequences for the sort of intervention carried out. Sin and Lyubomirsky (2009) summarized studies which have been conducted with diverse samples, including children, adolescents, young adults or students, adults, and older adults (Sin & Lyubomirsky, 2009). The samples furthermore include depressed as well as non-depressed individuals. The

present review, in contrast, is limited to adult samples of individuals without apparent mental illness, because interventions in the working context are subject to very specific requirements that are different from requirements of, for instance, clinical-level interventions.

In the widest sense, interventions in organizations are designed to benefit two parties, the individual and the organization, whereas the primary beneficiary of clinical interventions is the individual. Organizations will often consider the return on investment (ROI) or other financial measures before deciding whether to invest resources in HR practices (eg. Avolio, Avey, & Quisenberry, 2010). Consequently, cost-efficiency is an important requirement for organizational interventions. Moreover, the study by Ruhe et al. (2011) taught us that time is another crucial factor, because interventions have to be integrated into busy working days.

Bearing in mind that organizational interventions have to meet certain premises, some interventions included in the Sin and Lyubomirsky (2009) meta-analysis appear inadequate for organizational samples. Individual therapy, for example, which is an intervention technique that was mainly used in samples of depressed individuals, seems to be depending on high investments of both time and money. Organizations might opt for individual coaching as applied by Grant and his colleagues (Grant et al., 2009; Grant et al., 2010), but compared to an extensive individual therapy, there was a limited number of four individual coaching sessions in this study which were extended by a half-day group training. Generally speaking, coaching also appears to be an intervention that is preserved for employees of strategic importance only (e.g. leaders, high potentials), and is not applied to the whole workforce due to its rather costly nature.

The meta-analysis by Sin and Lyubomirsky (2009) also includes a number of rather lengthy studies, with some even longer than 12 weeks and many others lasting between five and 12 weeks. For organizations, those interventions might be unattractive, because long interventions will most likely also heighten costs. Interventions that might be particularly attractive are short interventions, online interventions, and interventions that can easily be combined with work schedules or even with specific tasks. Therefore, the remainder of the discussion will dwell on some particularly interesting interventions for organizations.

First, when focusing on short interventions the two studies on psychological capital interventions by Fred Luthans and his colleagues stand out. One study investigated the effect of a two times 45 minutes online intervention (Luthans et al., 2008), and the other one the effect of a two hour group training (Luthans et al., 2010). In both cases, highly desirable results were achieved. Second, there were three studies explicitly testing online interventions. The just mentioned study on the short psychological capital intervention (Luthans et al., 2008) and Abbott et al.'s (2009) study on the Resilience Online Program were two of them. Whereas the former study found significant enhancements in psychological capital, results regarding the latter study were ambiguous. It might again be suspected that

psychological capital is a construct that is especially powerful due to synergistic effects of its sub-components, implying that the enhancement of only one component might not be sufficient to entail other beneficial effects. Furthermore, participants of the intervention by Chan (2010a) used an online application to keep log of three things they were grateful for in a specific week during an eight week period. This intervention might also easily be transferable to a smartphone application, which would increase user-friendliness and accessibility even further. On a related note, the successful loving-kindness meditation program by Fredrickson et al. (2008) could build on one of the many existing meditation application for smartphones, so that meditation sessions would not have to be administered during lunch breaks. Finally, there were two interventions that exemplified how positive psychology interventions could be narrowly aligned with work tasks. Avey et al. (2011) demonstrated how simple changes in task assignments that underline the positive attitude of the leader can result in significant enhancements of follower positivity (measured as psychological capital) and performance. This finding is striking, as conveying positivity when defining a task does not have to cost anything. Similarly, Peelle (2006) let cross-functional teams work on a project to advance the work environment, the value for owners, and the benefits for customers. Thus, even if such an intervention would not result in the envisioned individual gains in happiness or similar variables, the group might still generate useful ideas and innovations for the organization.

In summary, we can conclude that there are some very promising, cost-effective, and short interventions that are especially suited for application in organizations. Particularly the convenient interventions increasing psychological capital might be of interest to organizations because their favorable effect on performance could be corroborated.

Limitations and Future Research

A major limitation of this review is the small number of included studies. Conclusions might be preliminary because more research is needed to validate the studies that have been done so far. Nonetheless, this review adequately estimates the state of the art of the research concerning positive psychology interventions in organizations so far. A related limitation of this study is that the answers to the second part of the research question about operating mechanisms that link positive psychology interventions to specific outcomes are only tentative, and conclusions in this regard strongly rely on available theory.

Those limitations, however, only allude to the fact that there is still much more work to be done when it comes to testing the effectiveness of organizational interventions that act on the principles of positive psychology. In general, more studies are needed that test the effects of different interventions with suitable research designs (randomized, controlled) and adequate sample sizes yielding sufficient power of statistical tests.

Of specific interest for organizations are studies that examine effects of positive psychology interventions on objective performance measures. As long as this link is not empirically corroborated, practitioners will be hesitating to implement positive approaches (Cameron et al., 2011). Based on the theoretical model by Cameron et al. (2011), researchers should also consider including diverse positive affective states (e.g. job satisfaction) and positive individual behaviors (e.g. engagement) as possible mediators in their research models.

Furthermore, our analysis revealed a predominance of interventions that focus on the enhancement of positive subjective experiences. It is striking that none of the hereby listed interventions explicitly focused on positive traits or trait-like constructs such as employee strengths, leading to an underrepresentation of intervention studies falling under part (b) of our definition of positive psychology interventions. We therefore call for studies that test the effects of organizational interventions that identify, develop, and use positive individual traits or trait-like constructs such as employee talents and strengths.

Similarly, more studies are needed that focus on part (c) of our definition, that is the investigation of positive institutions or positive psychology interventions at the organizational or organizational unit level. The only studies that did so focused on appreciative inquiry processes at the organizational level. Possibly other interesting interventions could aim at enhancing organizational virtuousness (Cameron, Bright, & Caza, 2004) or an organization's productive energy (Cole, Bruch, & Vogel, 2012). Both constructs have been found to be related to overall firm performance and might therefore be of high organizational relevance. A related issue concerns the almost exclusive investigation of dependent variables that are measured at the individual level. Given the multi-dimensional nature of organizations, an important avenue for future research is the examination of outcome-measures at the departmental, team, or organizational level.

A final criticism of this study might concern the strict definition of positive psychology interventions and the resulting possible exclusion of other interventions that might have potential benefits on well-being or other valuable constructs. Nevertheless, it has been the declared aim of this study to investigate what organizations can gain from applying principles of positive psychology to the management of their workforce. We therefore considered it necessary to draw a strict line between genuine positive psychology interventions and other interventions that might have favorable outcomes. It might, however, be beneficial to compare effects of positive psychology interventions and alternative approaches in future research.

From what we do know so far, we can conclude that positive psychology interventions seem to be a useful tool for organizations that adds value especially in terms of enhanced employee well-being. Furthermore, we revealed that increases in positive state-like variables are likely to be the key to improving organizational performance through positive psychology interventions.

CHAPTER 6

EFFECTS OF A STRENGTHS INTERVENTION ON GENERAL AND WORK-RELATED WELL-BEING: THE MEDIATING ROLE OF POSITIVE AFFECT

ABSTRACT

This article explores the use of strengths interventions as an organizational tool to increase the general and work-related well-being of employees. We hypothesize that participating in a strengths intervention leads to increases in general well-being (operationalized as positive affect, psychological capital, and satisfaction with life), and increases in work-related well-being (operationalized as increases in work engagement and decreases in burnout). We furthermore hypothesize that short-term increases in positive affect mediate the relationship between the strengths intervention and the other four indicators of well-being. To test these hypotheses, we conducted a field experiment with a sample of *N*=116 working people who were assigned to either the experimental group (participating in a strengths intervention) or a waitlist control group. All participants filled in a pre-intervention, post-intervention, and one month follow-up questionnaire. Results of this study indicate that participating in a strengths intervention creates short-term increases in employee positive affect and short- and long-term increases in psychological capital. We did not find evidence for a positive, direct effect of the strengths intervention on satisfaction with life, work engagement, and burnout respectively, but we did find support for indirect effects via the mediator positive affect.

Keywords: employees, field experiment, positive psychology, strengths, well-being

Chapter is based on:

Meyers, M. C. & van Woerkom, M. (*under review*). Effects of a strengths intervention on general and work-related well-being: The mediating role of positive affect.

INTRODUCTION

Many employers consider the protection and promotion of employee well-being as one of their top priorities for the upcoming years (Murphy, 2014). When aiming to promote well-being, organizations can draw on the growing body of scientific literature on positive psychology, the research field that is dedicated to the study of positive individual experiences and qualities (Hart & Sasso, 2011; Seligman & Csikszentmihalyi, 2000). One crucial assumption put forward by positive psychologists is that the use of positive, individual qualities, in other words, the use of individual strengths, triggers positive experiences and is therefore related to increased individual well-being (Peterson & Park, 2011; Quinlan et al., 2012).

Research among employees has, however, shown that only few of them report to use their strengths habitually when being at work (Buckingham, 2007), indicating that the enablement of strengths use at work might be a so far overlooked, yet effective lever to boost employee well-being. Organizations that want to make use of this lever can implement so-called strengths interventions, defined as training processes aiming at the identification, development, and use of the participants' strengths (Quinlan et al., 2012). Strengths interventions are of particular interest to organizations because they have been found to consistently enhance general well-being (for a review, see: Quinlan et al., 2012), and because they are brief and relatively easy to set up.

To date, there are still considerable gaps in the empirical research on strengths interventions which need to be bridged before a broad implementation of these interventions in the work context can be promoted in good conscience. First, most of the existing studies that investigate the effects of strengths interventions used samples of children, adolescents, or students (Quinlan et al., 2012), with only few studies making use of adult participants. Second, most of the existing studies have investigated interventions that target the use of strengths in daily life, but not particularly in the context of work (Meyers, Van Woerkom, & Bakker, 2013). Third, the existing studies focus mainly on indicators of general well-being as outcome variables, while, to the best of our knowledge, disregarding indicators of work-related well-being. Fourth, there are only few empirical studies that explore the mechanisms through which strengths interventions influence well-being, leaving us with limited knowledge of how or why they work (Quinlan et al., 2012).

In order to address these research gaps, the present study aims to investigate the effects of a strengths intervention with explicit links to the work context on employee positive affect, psychological capital (PsyCap), and life satisfaction as indicators of general well-being, as well as on work engagement and burnout as indicators of work-related well-being (Schaufeli, 2014). Furthermore, it explores the potential mediating role of positive affect in this regard, because we reason that strengths intervention will make people feel good about themselves

in the short-term, which will, in turn, contribute to their longer-term well-being (cf. positive-activity model; Lyubomirsky & Layous, 2013).

INDIVIDUAL STRENGTHS AND STRENGTHS INTERVENTIONS

Individual strengths have been defined as "potentials for excellence" (Biswas-Diener et al., 2011, p. 106), or, in more detail, as "ways of behaving, thinking or feeling that an individual has a natural capacity for, enjoys doing, and which allow the individual to achieve optimal functioning while they pursue valued outcomes" (Quinlan et al., 2012, p. 1146). Theory suggests that all people possess certain strengths, and that using strengths is intrinsically motivating, enjoyable, engaging, satisfying, energizing, and beneficial to one's health (Linley & Harrington, 2006; Peterson & Park, 2006; Peterson & Seligman, 2004). Despite these supposed benefits, today's organizations often overlook the potential of organizing work around employee strengths (Peterson & Park, 2006). When asked, most employees and leaders cannot readily identify their own strong points (Buckingham & Clifton, 2001; Kaplan & Kaiser, 2010), and report to not use their strengths very often when being at work (Buckingham, 2007). To raise awareness for the value of individual strengths, and to stimulate strengths use, organizations can make use of so-called strengths interventions which have been defined as follows:

> A strengths intervention is a process designed to identify and develop strengths in an individual or group. Interventions encourage the individual to develop and use their strengths, whatever they may be. Their goal is to promote well-being or other desirable outcomes (e.g. academic efficacy) through this process. (Quinlan et al., 2012, p. 1147)

The above quote addresses three elements of strengths interventions: identification, development, and use of strengths. The first of these elements, strengths identification, typically is about uncovering an individual's three to seven most dominant strengths. To this end, one can make use of strengths questionnaires such as the values in action inventory of strengths (VIA-IS; Peterson & Seligman, 2004), feedback from third people (cf. the reflected best self portrait; Roberts et al., 2005), individual reflections, or other more open-ended approaches (Quinlan et al., 2012). In our study, we put a particular emphasis on identifying strengths that are applicable in the work context. The second element, strengths development, aims at motivating people to cultivate and refine their strengths. This can, for instance, be achieved by teaching participants to use their strengths wisely, depending on situational factors (Biswas-Diener et al., 2011). Including this element in a strengths intervention is necessary in that it prevents participants from interpreting their strengths as stable entities. If people interpret their strengths as fixed, failing at a task that is related to their strengths can be very demotivating, which we sought to avoid (Biswas-Diener et al., 2011). The third element of strengths interventions, strengths use, is meant to encourage

individuals to use their most prominent strengths more often or in new ways (Seligman et al., 2005). Typically, participants of a strengths intervention are asked to make concrete action plans in which they specify how, how often, when, and in which situations they plan to use their strengths.

Prior research has shown that strengths interventions are an effective tool to increase the overall well-being of children, adolescents, and university students (for a review, see: Quinlan et al., 2012), but only little is known about the effects of strengths interventions on adults and, in particular, working people (Meyers, Van Woerkom, & Bakker, 2013).

The Relationship between Strengths Interventions and the General Well-being of Employees

In the scientific literature, numerous terms and constructs are used to discuss and assess general, individual well-being. Among them we find happiness, positive affect, positive emotions, positive subjective experiences, satisfaction with life, positive psychological capital (PsyCap), sense of fulfillment, and vitality (Hart & Sasso, 2011; Quinlan et al., 2012). In the context of this study, we focus on three of these constructs which are supposed to display varying degrees of stability: positive affect, PsyCap, and life satisfaction. Positive affect is the least stable of these three constructs and is defined as "the extent to which a person feels enthusiastic, active, and alert. High positive affect is a state of high energy, full concentration, and pleasurable engagement, whereas low positive affect is characterized by sadness and lethargy" (Watson, Clark, & Tellegen, 1988, p. 1063). The notion that positive affect is as a state implies that it is a fluctuating variable which tends to vary across time and situations. Psychological capital has been characterized as a state-like variable, indicating that it also fluctuates, but not to the extent that pure states do (Luthans, Youssef, et al., 2007). PsyCap has been defined as "one's positive appraisal of the particular situation, the physical and social resources available, and the probability of succeeding based on personal effort, upward striving, and perseverance" (Luthans, Youssef, et al., 2007, p. 335). More specifically, PsyCap is a higher order construct consisting of the sub-components self-efficacy, hope, optimism, and resilience (Luthans, Youssef, et al., 2007). Finally, satisfaction with life has been defined as a personal judgment or appraisal of one's overall life circumstances as compared to standards that individuals set for themselves (Diener, Emmons, Larsen, & Griffin, 1985). This construct has been found to be modestly stable, with a majority of people showing relative long-term stability in their satisfaction with life and a minority of people who experience significant changes in life satisfaction over time (Fujita & Diener, 2005).

A positive link between participating in a strengths intervention and positive affect can be expected building on basic assumptions about the nature of strengths and strengths use. By definition, individuals enjoy applying their strengths (Quinlan et al., 2012), and will feel good about themselves, fulfilled, energized, excited, and invigorated whenever they get the chance to work on or with their strong points (Peterson & Seligman, 2004). Consequently, as

strengths interventions stimulate strengths use and development, they should trigger increases in positive affect. Prior cross-sectional research has supported the link between having the opportunity to develop and use individual strengths at work and positive affect (van Woerkom & Meyers, 2014).

A link between strengths interventions and psychological capital can be expected due to links between the different components of these interventions and the four subcomponents of PsyCap. First, the process of strengths identification is likely to increase the participants' resilience by increasing their awareness for the qualities and assets they possess. These qualities and assets, in turn, can be interpreted as important personal resources that help to overcome setbacks and hardships in life (Park, 2004). Second, strengths interventions ask participants to set goals regarding the future development and use of their strengths, and goal-setting is a purposeful means to increase hope (Luthans et al., 2010). Third, developing and using strengths often leads to successful task performance and a sense of accomplishment (Linley & Harrington, 2006), and experiences of success or mastery, in turn, are a main predictor of self-efficacy (Bandura, 1977). Finally, strengths interventions are likely to increase optimism because their inherent focus on positive individual qualities and individual successes facilitates the development of positive expectations for the future (Luthans et al., 2010).

In addition to the effects on the more fluctuating well-being indicators, we also expect an effect on life satisfaction as a more stable well-being construct representing a subjective judgment of one's overall life circumstances (Diener et al., 1985). This judgment might be positively influenced by redirecting the participants' attention towards the positive features and qualities they possess. Another argument for the link between strengths interventions and life satisfaction builds on humanistic psychology and assumptions about authenticity (e.g., Rogers, 1961). Humanistic psychologists like Rogers have theorized that having the opportunity to act genuinely and in a way that is congruent to one's self-concept is a hallmark of optimal individual functioning. Research evidence has corroborated that authenticity is related to increased individual well-being and satisfaction (Sheldon, Ryan, Rawsthorne, & Ilardi, 1997). In line with this idea, positive psychologists argue that individuals who play to their strengths act in accordance with their true selves and experience feelings of authenticity (Peterson & Seligman, 2004), so that a strengths intervention should entail increases in life satisfaction.

Research evidence so far corroborates these theoretical assumptions: In one of the few strengths intervention studies with an adult sample, Seligman et al. (2005) found that individuals who tried to use their strengths in a new way in their daily lives experienced lasting increases in happiness and decreases in depressive symptoms. In another study by Mitchell et al. (2009), adults who participated in an internet-based strengths intervention reported increases in subjective well-being directly and three months after the intervention.

Based on theoretical arguments and the research evidence on strengths interventions with no particular link to the work context, we hypothesize the following with regard to strengths interventions for employees:

> *Hypothesis 1:* Participating in a strengths intervention leads to increases in general well-being of employees, that is, increases in positive affect, psychological capital, and satisfaction with life.

The Relationship between Strengths Interventions and Work-related Forms of Well-being

Work engagement and burnout are two aspects of work-related well-being (Schaufeli, 2014) which are linked to organizational commitment, innovativeness, health, and employee performance, among others (Schaufeli & Taris, 2014). Work engagement, on the one hand, has been defined "as a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption" (Schaufeli, Salanova, González-Romá, & Bakker, 2002, p. 74). Employees with high levels of work engagement put much effort and energy in their work, take pride and find inspiration in the work activities they pursue, and immerse themselves fully in their tasks (Schaufeli et al., 2002). Burnout, on the other hand, is a "prolonged response to chronic emotional and interpersonal stressors on the job, and is defined by the three dimensions of exhaustion, cynicism, and inefficacy" (Maslach, Schaufeli, & Leiter, 2001, p. 397). That is, burned-out individuals experience feelings of extreme fatigue (exhaustion), develop an indifferent attitude towards their work (cynicism or depersonalization), and show reduced occupational accomplishments (inefficacy; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001; Maslach et al., 2001). While the two constructs have a moderate to strong negative relation, research evidence suggests that they represent distinct well-being factors (Schaufeli, 2014).

Both engagement and burnout can be influenced by means of workplace interventions (Le Blanc & Schaufeli, 2008; Schaufeli & Salanova, 2010), and it has been proposed that strengths interventions which stimulate participants to employ their strengths at work might be particularly promising in this regard (Chan, 2010b; Schaufeli & Salanova, 2010). From a theoretical perspective, strengths interventions should exert a negative influence on burnout and a positive influence on engagement for the following five reasons. First, employing strengths is an energizing process (Peterson & Seligman, 2004) causing individuals to feel more invigorated and less exhausted. In other words, employing strengths should increase the vigor component of engagement (Schaufeli et al., 2002), while decreasing the exhaustion component of burnout. Second, developing and using strengths is intrinsically motivating (Peterson & Seligman, 2004), so that it can attenuate the motivation-related symptoms of burnout such as cynical behavior and withdrawal from work (Schaufeli & Taris, 2005). Third, being able to use strengths makes people feel authentic and true to themselves, and gives them the opportunity to act in accordance with their values (Peterson & Seligman, 2004).

Consequently, they will have a strong sense of leading a meaningful and significant live, which, according to Schaufeli and Salanova (2010), is a key predictor of being engaged in one's activities. Fourth, Seligman (2002) has proposed that people can trigger flow experiences (Csikszentmihalyi, 1990) by getting to know their strengths, choosing jobs that match their strengths profiles, and actively putting their strengths to use. Flow experiences, in turn, are closely related to the absorption component of engagement (Schaufeli et al., 2002). Fifth, strengths can be interpreted as personal resources which can attenuate the potentially harmful effect of high job demands on burnout (Bakker & Demerouti, 2007). That is, employees who have the opportunity to draw on their strengths when dealing with a high work load or stressful situations might experience less strain than other employees in such a situation.

To date, there is only little extant empirical research investigating the hypothetical links between using individual strengths and respectively work engagement and burnout. One of the few studies was conducted by Gallup researchers who found that a strengths intervention led to significant increases in the engagement of employees working in a large automobile manufacturing firm (Clifton & Harter, 2003). In another study, it has been found that the applicability of character strengths at work—defined as the degree to which a given situation allows for the employment of an individual's strengths (Harzer & Ruch, 2012)—is related to positive experiences at work such as engagement (Harzer & Ruch, 2012, 2013). To the best of our knowledge, there are no empirical studies investigating the link between strengths interventions and burnout. It has, however, been found that other positive interventions such as an intervention to promote employee resilience led to significant decreases in stress and exhaustion (Liossis et al., 2009; Millear et al., 2008). Building on these theoretical and empirical arguments, we therefore expect the following:

> *Hypothesis 2:* Participating in a strengths intervention leads to increases in work-related well-being of employees, that is, increase in engagement and decreases burnout.

The Mediating Role of Positive Affect in the Relationship between Strengths Interventions and Well-being

Building on the positive-activity model (Lyubomirsky & Layous, 2013), we propose that the relationship between strengths interventions and well-being is mediated by positive affect. The model implies that individuals experience a range of positively toned emotions when they engage in positive activities such as working on their strengths (Lyubomirsky & Layous, 2013), and that an accumulation of these emotions, in turn, contributes to an individual's well-being in the longer term.

The effect of positive affect on well-being can be explained in more detail by two theories about positive emotions. First, the broaden-and-build theory of positive emotions

(Fredrickson, 2001) proposes that feeling good opens up the mind and broadens the general perspective with which individuals look at their lives. Eventually, individuals are therefore more likely to perceive, appreciate, and embrace the good things that overcome them, and might, in turn, experience increases in life satisfaction. Similarly, the accumulated experience of positive emotions is said to lead to increases in an individual's psychological resources (Fredrickson et al., 2008), among others, psychological capital. That is, individuals who frequently experience positive emotions, will develop a more hopeful and optimistic outlook on their future, and will be more confident about their abilities to master tasks and to overcome setbacks. Furthermore, individuals who feel good about themselves are motivated to approach stimuli and show exploratory behavior. When being in a positive affective state, employees are therefore expected to show greater interest in their work and to immerse themselves fully in their tasks, which eventually leads to more work engagement (Salanova, Llorens, & Schaufeli, 2011). Second, the so-called undoing effect of positive emotions (Fredrickson, Mancuso, Branigan, & Tugade, 2000) can help to explain the negative relationship between positive affect and burnout. The undoing effect implies that positive affective states tend to down-regulate the effects of negative emotions, meaning that positive emotions can serve as a resource that helps individuals to cope with stressful events or threats (Fredrickson et al., 2000). Since burnout is conceptualized as a response to chronic stressors (Maslach et al., 2001), we reason that the undoing effect of positive emotions is relevant to burnout.

To our knowledge there are no published studies that investigate positive affect as a mechanism through which strengths interventions increase well-being. It has, however, been found that another positive intervention based on guided mediations led to short-term increases in positive emotions which, in turn, predicted longer-term increases in personal resources and life satisfaction as indicators of well-being (Fredrickson et al., 2008). Based on the positive-activity model (Lyubomirsky & Layous, 2013), theoretical considerations on the effects of positive emotions, and the available research evidence, we therefore hypothesize the following:

> *Hypothesis 3:* Positive affect mediates the relationship between strengths interventions and respectively satisfaction with life, PsyCap, engagement, and burnout.

METHOD

Design and Procedure

To test our research hypotheses, we developed a strengths intervention in collaboration with a Dutch consultancy specialized in training and development, and conducted a field experiment to test the effects of this intervention. A convenience sample of working adults was recruited via the website of the consultancy where the intervention was advertised as a

strengths training. Participants could self-subscribe into one of four training groups not knowing that two of these groups would form the experimental group (subsequently, we use this term interchangeably with the term strengths intervention group), while the two others would form the waitlist-control group. Following this procedure, systematic differences between experimental- and control group should be avoided. All participants filled in three questionnaires at different time-points: a pre-intervention questionnaire approximately two weeks before the intervention (t0), an immediate post-intervention- (t1), and a one-month follow-up questionnaire (t2). At t0 and t2, the exact same questionnaires including all study variables were distributed. The post-intervention (t1) questionnaire only measured positive affect and psychological capital because these variables are conceptualized as states or state-like, meaning that they can potentially fluctuate over short time spans (Luthans, Youssef, et al., 2007; Watson et al., 1988). We did not expect immediate changes in satisfaction with life, engagement, and burnout after the training because these variables are conceptualized as more stable than positive affect and PsyCap (e.g., Schaufeli et al., 2002).

The Strengths Intervention

The half-day strengths intervention we tested consisted of three different phases: the preparation phase, the training phase, and the homework phase. In the first phase, participants were asked to complete a preparatory assignment with the aim of discovering their three most dominant strengths. To this end, they received a stack of strengths cards with 24 strengths applicable in the work context and some blank cards that could be filled in individually. With the help of these cards and several guiding questions that could be answered individually or by third persons, participants were triggered to search for their own talents. Within the subsequent phase (training phase), participants took part in a half-day training which was given to 40-45 individuals at a time and was facilitated by two professional trainers. The main goals of the training were to convey a mindset for growth and development and to motivate participants to employ their strengths in the pursuit of their dreams. To these ends, participants were shortly introduced to theory on working based on potential and growth mindsets. Afterwards, the participants were stimulated to think of their ideal future: What would their future look like if everything went as planned, if they used their strengths in an optimal way, and if they lived conform to their main values (cf. dream phase of appreciative inquiry; Cooperrider & Srivastva, 1987). Subsequently, the participants were asked to reflect on ways in which they could develop and use their strengths in order to get closer to the realization of their dream. In addition, we aimed at increasing their understanding of personal, social, and job resources they could draw upon in this process. The last steps in the training consisted of making concrete individual action plans for developing and using strengths, and choosing a partner who would check one's adherence to the plan. Finally, with regard to the third phase following the training, we encouraged the participants to keep in contact with their chosen partners so that they could remind each other of their plans. In addition, all participants received a postcard, which they

had written to themselves at the end of the training, approximately two weeks after the training; the postcards contained positive messages of the participants to themselves that reminded them to employ their strengths. As an optional homework assignment, we encouraged the participants to keep a diary of things they have been proud of each day.

Measures

The questionnaires used to measure the study variables at different time points were in Dutch. For all measures, except for psychological capital, validated Dutch translations were available.

Positive affect

We measured positive affect (PA) with the 10-item PA subscale of the Positive and Negative Affect Schedule (PANAS; Watson et al., 1988). Respondents were asked to indicate the extent to which they were experiencing 10 particular positive affective states at that moment. Examples of these affective states are "interested", "excited", and "strong." The five-point Likert response scale ranged from one (1 = very slightly or not at all) to five (5 = extremely). Cronbach's Alpha values were .85 (t0), .86 (t1), and .90 (t2) respectively.

Psychological capital

Psychological capital was measured with a 16-item measure encompassing four items of the New General Self-efficacy Scale (Chen, Gully, & Eden, 2001), four items of the revised Life Orientation Test (LOT-R measuring optimism; Scheier, Carver, & Bridges, 1994) translated into Dutch by Klooster et al. (2010), four items of the State Hope Scale (Snyder et al., 1996), and four items of the Brief Resilience Scale (Smith et al., 2008). Scales for self-efficacy, hope, and resilience were translated to Dutch by means of the translation-back translation procedure. Sample items are 'When facing difficult tasks, I am certain that I can accomplish them' (self-efficacy); 'I'm optimistic about my future' (optimism); 'At the present time, I am energetically pursuing my goals' (hope); and 'I tend to bounce back quickly after hard times' (resilience). As we aimed to capture the state-like nature of the four constructs, we asked respondents to indicate the extent to which they would agree with each of the items at the present moment. If necessary, scales were adapted by reformulating phrases in such a way that generalized statements ('usually', 'always', 'rarely', 'hardly ever') were omitted. All scales were scored on a 5-point Likert scale from one (1 = strongly disagree) to five (5 = strongly agree). Exploratory factor analysis indicated that the 16 items measured one factor, while parallel analysis (O'Connor, 2000) showed a two-factor solution. Because the two factor solution was not interpretable in terms of the four pre-existing scales, we decided to continue with a one-factor scale measuring overall PsyCap. Cronbach's alpha values of the combined PsyCap scale were adequate for all three measurement points (α t0 = .85; α t1 = .86; α t2 = .90).

Satisfaction with life

Satisfaction with life was measured with the five-item Satisfaction with Life Scale (SWLS) developed by Diener, Emmons, Larsen, and Griffin (1985). Respondents were asked to indicate their agreement with items such as "In most ways my life is close to my ideal" on a seven-point Likert scale from one (1 = strongly disagree) to seven (7 = strongly agree). Cronbach's alpha values were adequate with .88 (t0) and .92 (t2) respectively.

Work engagement

Work engagement was measured with the nine-item version of the Utrecht Work Engagement Scale (UWES-9; Schaufeli, Bakker, & Salanova, 2006). The scale includes items like "At my work, I feel bursting with energy" and "My job inspires me." Answers could be given on a seven-point Likert scale from one (1 = never) to seven (7 = always/every day). Cronbach's Alpha values were .95 (t0) and .95 (t2) respectively.

Burnout

We measured burnout with the five-item exhaustion subscale of the Utrechtse Burnout Scale (UBOS-A; Schaufeli & van Dierendonck, 2000) which is the Dutch version of the Maslach Burnout Inventory (MBI-GS; Schaufeli, Leiter, Maslach, & Jackson, 1996). Answers could be given on a 7-point scale from one (1 = never) to seven (7 = always/every day). Example items are "I feel burned out from my work", and "I feel tired when I get up in the morning and have to face another day on the job". Cronbach's Alpha were .94 (t0). and .92 (t2) for the two measurement points.

Sample

At pre-measurement, *N*=179 Dutch people completed the research questionnaire. 71.5% of them were female, and their mean age was 42.39 years. The majority of the sample was highly educated: 45.8% completed higher vocational education, and 36.3% completed academic education. They were working in diverse sectors in the Netherlands, with business services (15.6%), government (14%), and healthcare (12.8%) as the three biggest represented sectors. The average tenure of the participants was 8.79 years, and 25.7% held a leadership function. 130 participants filled in all three questionnaires (*N*=67 for the experimental group and *N*=63 for the control group). The attrition rate was 27.4%. In order to compare the people who remained in the study to the people who dropped out of the study, we manually created a dichotomous variable for attrition (yes/no). We did not find any significant differences between the remainders and drop-outs on the demographic variables gender, age, education, sector, tenure, or leadership function. Due to deletion of four outlying cases, and due to respondents with missing values on some of the study variables, the minimum sample size for all analyses was further reduced to *N* = 116 respondents.

Data Analysis

In order to investigate the effects of the strengths intervention on the five indicators of well-being, we conducted several mixed between-within subject analyses of variance (ANOVA's) with group as a between-subject factor and time as a within-subject factor. Prior to conducting these analyses, data were checked for univariate normality and for outliers. Analysis of univariate normality revealed that all variables except for burnout were reasonably normally distributed. Burnout was positively skewed which led us to transform it with the square root transformation (Tabachnick & Fidell, 2007). Analysis of outliers furthermore indicated that there were four cases with outlying values on at least one of the study variables, which led us to exclude those cases from further analysis (Tabachnick & Fidell, 2007). In addition to the mixed between-within subject ANOVAs to investigate effects on the different well-being variables over time, we conducted sequential multiple regression analyses to investigate the expected mediating effect of positive affect (Tabachnick & Fidell, 2007). To this end, variables were entered in different blocks into the regression equation: the control variables gender, age, education, and baseline measures of the respective well-being variable (t0) were entered in the first block. In the second block, the grouping variable was entered into the equation. Finally, in the third block, the presumed mediator positive affect (t1) was entered. We tested the significance of the hypothesized indirect effect by constructing 95% bootstrap confidence intervals based on 5000 bootstrap samples (Hayes & Preacher, 2013).

RESULTS

Preliminary Analysis and Descriptive Statistics

We conducted a multivariate analysis of variance (MANOVA) to test whether there were significant differences between the experimental and control group on any of the five study variables prior to the strengths intervention (t0). Results of the MANOVA indicated that the groups differed neither on a linear combination of positive affect, PsyCap, satisfaction with life, engagement, and burnout (Wilks' Lambda=.99, $F(5,162)=.09$, $p=.99$, partial $\eta 2=.003$), nor on any of the variables when considered separately. Table 1 displays means, standard deviations, and intercorrelations of all study variables.

Main Analysis: ANOVA's

Results of the five mixed between-within subjects ANOVA's revealed the following. First, when analyzing positive affect as a dependent variable, we found a significant main effect of time (Wilks' Lambda = .95, $F(2,124) = 3.34$, $p < .04$, partial $\eta 2 = .05$), and a non-significant main effect of group (F (1,125) = 1.50, p = .22, partial $\eta 2$ = .01). The time*group interaction effect was significant (Wilks' Lambda = .91, F (2,124) = 5.99, $p < .01$, partial $\eta 2=.09$), which indicates that the changes in positive affect over time were different for the two groups. The

Table 1

Means, Standard Deviations, and Correlations for Study Variables

Variable	M	SD	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.
1. Group [a]	-	-	-															
Baseline measurement																		
2. Gender [b]	-	-	-.15	-														
3. Age	42.33	8.89	-.01	-.16*	-													
4. Education [c]	4.18	.74	-.05	.10	-.04	-												
5. Positive affect t0	3.52	.55	-.03	.00	.02	.04	.85											
6. SWL t0	4.79	1.02	-.01	-.10	.03	.16*	.40**	.88										
7. PsyCap t0	3.71	.48	-.04	-.01	.10	.15	.57**	.48**	.85									
8. Engagement t0	4.99	1.20	-.01	-.08	.11	.01	.51**	.35**	.55**	.95								
9. Burnout t0	1.62	.38	-.01	.01	-.19*	-.14	-.38**	-.30**	-.43**	-.35**	.94							
Post-measurement																		
10. Positive affect t1	3.55	.57	.26**	.02	-.05	-.09	.54**	.23**	.38**	.38**	-.17*	.86						
11. PsyCap t1	3.80	.48	.06	-.04	.17*	.18*	.62**	.50**	.77**	.44**	-.44**	.45**	.86					
1-month follow-up																		
12. Positive affect t2	3.48	.58	.01	-.14	-.06	.11	.51**	.25**	.51**	.43**	-.27**	.51**	.47**	.90				
13. SWL t2	4.94	1.03	.07	-.13	-.04	.15	.40**	.68**	.50**	.44**	-.34**	.29**	.54**	.47**	.92			
14. PsyCap t2	3.83	.51	.07	-.13	.01	.18*	.53**	.45**	.79**	.54**	-.45**	.37**	.76**	.63**	.66**	.90		
15. Engagement t2	4.96	1.14	.06	-.09	.07	.03	.53**	.34**	.54**	.83**	-.31**	.41**	.49**	.52**	.51**	.60**	.95	
16. Burnout t2	1.56	.33	-.11	.10	-.25**	-.02	-.43**	-.28**	-.42**	-.41**	.81**	-.31**	-.41**	-.27**	-.40**	-.47**	-.46**	.92

Note. N=116. [a] Group (1='strengths intervention group', 0=waitlist control group'); [b] Gender (1='female', 0='male'); [c] Education is treated as a continuous variable in further analyses; SWL = Satisfaction with life. Cronbach's Alphas are presented on the diagonal. *p<.05; **p<.01.

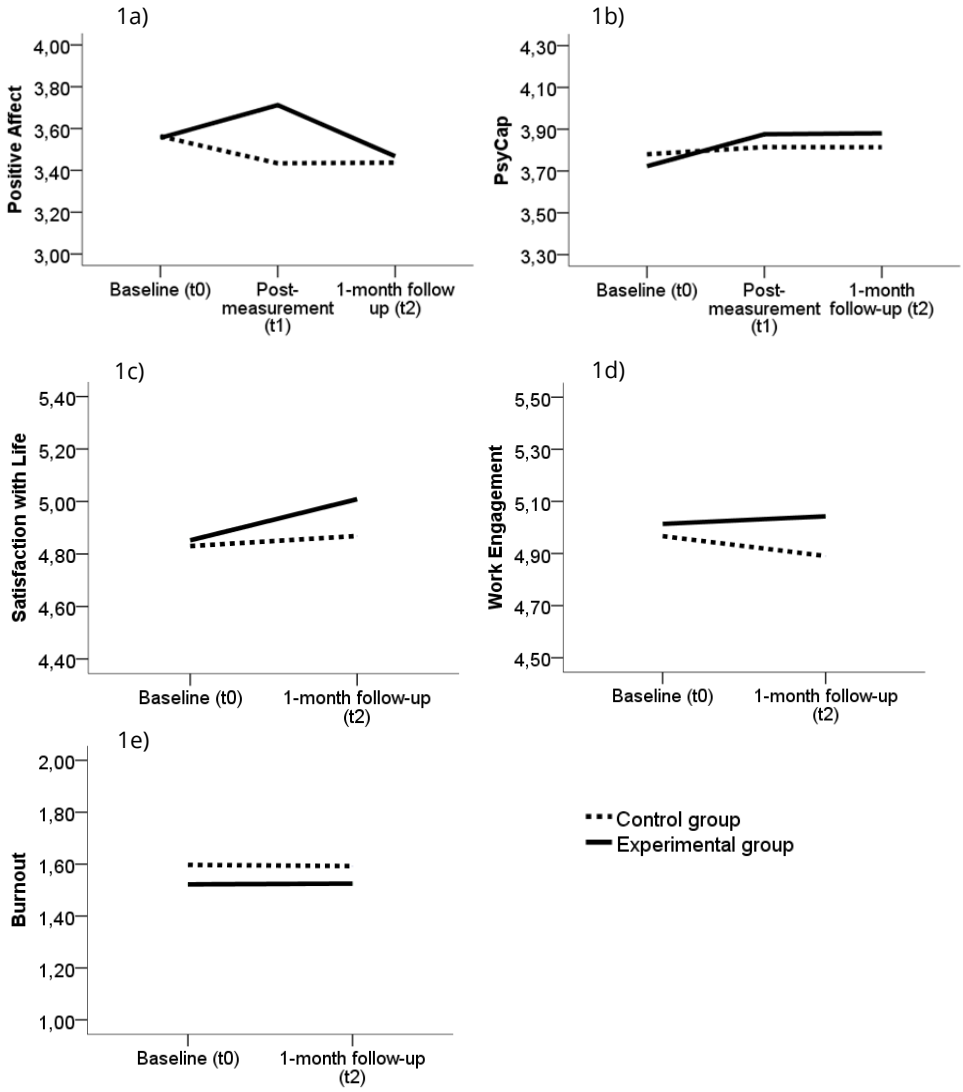

Figure 1. **Interactions plots of the effects of the strengths intervention on mean scores of positive affect (1a), PsyCap (1b), satisfaction with life (1c), work engagement (1d), and burnout (1e) over time.**

interaction plot (see Figure 1a) indicates that the participants of the experimental group experienced a boost in positive affect at post-measurement (t0), but that this boost was not maintained over the one-month follow-up period. The control group, in comparison, displayed relatively stable (slightly dropping) levels of positive affect across the three measurement points. In the second ANOVA including PsyCap as a dependent variable, the main effect of time was again significant (Wilks' Lambda = .88, $F(2,119) = 7.98$, $p = .001$, partial η2 = .12), whereas the main effect of group was not ($F(1,120) = .09$, $p = .77$, partial η2 = .00). The time*group interaction effect was found to be significant (Wilks' Lambda = .95, $F(2,119) = 3.30$, $p < .05$, partial η2=.05). The interaction plots shows that the experimental group experienced gains in PsyCap at post-measurement (t1) which were maintained over the one-month follow-up period (t2), whereas the control group displayed relatively stable PsyCap values across the three measurement points (see Figure 1b). Paired-sample t-tests confirmed that the increases in PsyCap at both measurement points were significant for the experimental group. Third, the repeated measures ANOVA which we conducted to investigate the intervention's effects of satisfaction with life indicated that the main effect of time (Wilks' Lambda = .99, $F(1,140) = 2.01$, $p = .16$, partial η2 = .01), the main effect of group ($F(1,120) = .26$, $p = .61$, partial η2 = .00), and the time*group interaction effect (Wilks' Lambda = .995, $F(1,140) = .74$, $p = .39$, partial η2=.01) were non-significant. The interaction plot shows that the experimental group experienced slight gains in satisfaction with life over the one-month measurement period, whereas the control group displays relatively stable levels of this variable (see Figure 1c). However, a paired-sample t-test indicated that the increase of the experimental group was not significant. Taken together, these results provide partial support for Hypothesis 1 regarding the positive effect of the strengths intervention on general well-being.

Similar results were found in the fourth ANOVA, investigating the effect of the intervention on work engagement. Neither the main effect of time (Wilks' Lambda = .999, $F(1,133) = .16$, $p = .69$, partial η2 = .00), nor the main effect of group ($F(1,133) = .67$, $p = .61$, partial η2 = .00), nor the time*group interaction turned out to be significant (Wilks' Lambda = .99, $F(1,133) = .78$, $p = .38$, partial η2=.01). The interaction plot revealed that the experimental group displayed stable levels of engagement over time, whereas the control group's engagement slightly decreased (see Figure 1d). A paired-sample t-test revealed that this change over time was not significant. Finally, results for burnout followed a similar pattern. Both the main effect of time (Wilks' Lambda = 1.00, $F(1,136) = .11$, $p = .74$, partial η2 = .00) and group ($F(1,136) = 1.45$, $p = .23$, partial η2 = .01), as well as the time*group interaction effect (Wilks' Lambda = 1.00, $F(1,136) = .05$, $p = .82$, partial η2 = .00) were found to be non-significant. Checking the interaction plots clarifies that both groups displayed relatively stable values of burnout over time (see Figure 1e). Taken together, these results led us to reject Hypothesis 2 regarding the positive direct effect of the strengths intervention on work-related well-being.

Main Analysis: Regression Analyses

Building forth on the results of the repeated measures ANOVA's, we investigated whether the intervention influenced satisfaction with life, PsyCap, work engagement, and burnout indirectly via post-measurement increases in positive affect. To this end, we conducted a multiple regression analysis with positive affect at post-measurement (t1) as a dependent variable in a first step (see Table 2). Results revealed that the strengths intervention significantly predicted post-measurement (t1) scores on positive affect (β = .28, p < .001, ΔR^2 = .08), while controlling for gender, age, education, and baseline scores on positive affect (t0).

Table 2

Results of Hierarchical Regression Analysis Predicting Positive Affect at the Immediate Post-measurement (t1)

	B(SE)	**B**	***B(SE)***	**β**
Step 1				
Gender[a]	.03(.09)	.02	.08(.09)	.06
Age	-.00(.01)	-.07	-.00(.00)	-.06
Education[b]	-.09(.05)	-.11	-.08(.05)	-.10
Positive Affect (t0)	.57(.07)	.55***	.58(.07)	.56***
Step 2				
Group [c]			.32(.08)	.28***
	R^2 =.31		ΔR^2=.08***	

Note. [a]Gender (1='female', 0='male'); [b] treated as a continuous variable; [c] Group (1='experimental group', 0= 'control group'); # p<.10; * p<.05; ** p<.01; *** p<.001.

In four other regression analysis (see Table 3), we regressed satisfaction with life, PsyCap, work engagement, and burnout at the one-month follow-up (t2) on gender, age, education, the baseline score of the respective dependent variable (t0) (these control variables were entered in the first block), the grouping variable (entered in the second block), and positive affect at post-measurement (t1) (entered in the third block). In these regression analyses we found that the grouping variable did not have a significant positive effect on satisfaction with life, PsyCap, and engagement, but that it had a marginally significant, negative effect on burnout (β = -.09, p < .10, ΔR^2 = .01). Furthermore, we found that positive affect at post-measurement (t1) had a significant, positive effect on satisfaction with life (β = .15, p < .05, ΔR^2 = .02), a non-significant effect on PsyCap (β = .06, p = .29, ΔR^2 = .00), a marginally significant, positive effect on engagement (β = .10, p < .10, ΔR^2 = .01), and a significant, negative effect on burnout (β = -.16, p < .01, ΔR^2 = .02). The latter findings hint at the potential mediating role of positive affect in the relationship between the strengths intervention and respectively satisfaction with life, work engagement, and burnout.

Table 3

Results of Hierarchical Regression Analyses Predicting the Well-Being Indicators at the One-month Follow-up (t2)

	Satisfaction with life (t2)			PsyCap (t2)			Work engagement (t2)			Burnout (t2)		
Step 1												
Gender[a]	-.08	-.07	-.08	-.15**	-.14*	-.14*	-.03	-.02	-.03	.07	.06	.06
Age	-.07	-.06	-.06	-.09#	-.09#	-.08	-.03	-.03	-.02	-.08	-.08	-.09#
Education[b]	.05	.05	.07	.08	.08	.09	.03	.03	.04	.09#	.08	.07
Baseline (t0)[c]	.67***	.67***	.63***	.79***	.79***	.77***	.83***	.83***	.79***	.81***	.81***	.78***
Step 2												
Group[d]		.07	.03		.09	.07		.06	.04		-.09#	-.05
Step 3												
PA (t1)[e]			.15*			.06			.10#			-.16**
ΔR^2	.47***	.00	.02**	.66***	.01	.00	.69***	.00	.01#	.68***	.01#	.02*

Note. Table reports standardized regression weights (β's); [a] Gender (1='female', 0='male'); [b] Treated as continuous variable; [c] Baseline measure of the respective dependent variable; [d] Group (1= 'experimental group', 0= 'control group'); [e] PA = positive affect; # p<.10; * p<.05; ** p<.01; *** p<.001.

Computation of 95% bootstrap confidence intervals confirmed that the indirect effects of the strengths intervention via the mediator positive affect were significant for satisfaction with life (95% CI [.00, .18]), engagement (95% CI [.01, .18]), and burnout (95% CI [-.05, -.00]), but not for PsyCap (95% CI [-.01, .06]).

DISCUSSION

Literature on positive psychology suggests that strengths interventions can be an efficient tool to increase employee well-being, which is a main goal for many employers (Murphy, 2014). Nonetheless, there is a lack of research on the actual application of strengths interventions in work contexts (Meyers, Van Woerkom, & Bakker, 2013), and on the mechanisms through which they operate (Quinlan et al., 2012). Within this study, we therefore made a first attempt to investigate a brief strengths intervention for working people that aims at identifying employee strengths and increasing their subsequent development and use. Results of the field experiment we conducted to test the effects of this strengths intervention revealed that it led to increases in employee positive affect immediately after the intervention, as well as to increases in psychological capital immediately after the intervention and at the one-month follow-up measurement. While we did not find any direct effects of the intervention on satisfaction with life, work engagement, and burnout, we found indirect effects via positive affect.

These results indicate that working on strengths in the context of a strengths intervention is a positive experience for the participants triggering favorable affective states such as excitement, interest, enthusiasm, and pride immediately after the intervention. This finding is in line with theory highlighting that feeling good about oneself is one distinguishing feature of true strengths (Peterson & Seligman, 2004). The favorable effect of the intervention on positive affect has, however, not been sustained until one month after the intervention, and this might be explained by the fluctuating nature of affective states. Affect can change from one moment to the next depending on situational factors (George, 1991), and while the strengths intervention appears to be a strong situational factor that triggers positive affect as an immediate response, we do not have any insights on the situational factors that might have influenced the respondents' affective states at the one-month follow-up measurement.

Even though the post-measurement rise in positive affect itself was not maintained in the long run, it seems to have entailed favorable effects on three out of four more stable well-being indicators at the one-month follow-up, namely satisfaction with life, work engagement, and burnout. This finding is in line with the positive-activity model (Lyubomirsky & Layous, 2013), which proposes that being involved in positive activities such as working on and developing strengths leads to short-term increases in positive affect, which contribute to an individual's longer-term well-being. The beneficial effect of a seemingly minor incidence such as momentary increases in positive emotions have been explained in the context of the

broaden-and-build theory of positive emotions (Fredrickson, 2001). When experiencing positive emotions, individuals undergo a shift in their perspective upon their surroundings—from a rather narrow to a broad perspective—which seems to create room for the apprehension of more good and valuable aspects in one's life. As a consequence, individuals seem to evaluate their overall life circumstances in a more favorable way, which explains increases in satisfaction with life (Diener et al., 1985). The broadened perspective also appears to influence how employees perceive and approach their work tasks, leading to more curiosity and more exploratory behavior at work (Fredrickson, 2001). This, in turn, sparks the employees' interest in and enthusiasm about their work, which eventually facilitates work engagement at one-month follow-up. In addition, the positive emotions experienced after the intervention appear to act as a buffer against work-related stressors (cf. the undoing effect of positive emotions; Fredrickson et al., 2000), helping individuals deal with daily hassles at work, and thus attenuating burnout.

Contrary to the expectation that increases in positive affect would contribute to building personal resources such as PsyCap over time (Fredrickson, 2001), the mediating effect of positive affect was not supported in this regard. Rather than being influenced indirectly, PsyCap was only enhanced directly through the strengths intervention. It thus appears that strengths interventions do not only directly influence fluctuating positive states (positive affect), but also state-like variables. This finding is interpretable in the context of the positive-activity model (Lyubomirsky & Layous, 2013), which specifies that interventions that stimulate positive activities such as developing strengths not only trigger positive affect but also positive thoughts. PsyCap might be interpreted in the light of positive thoughts about oneself, that is, about personal capabilities and chances of success and attainment of goals in the future. In more detail, a strengths intervention directly contributes to building PsyCap, because working on strengths triggers mastery experiences and emphasizes personal assets, which contributes to building self-efficacy and resilience (Luthans et al., 2008). The strengths intervention furthermore builds on positive feedback and goal-setting, and, taken together, these elements should make the participants feel more optimistic about their future, and should increase the energy and effort they invest in achieving their goals (Luthans et al., 2008).

In contrast to direct effects on PsyCap, no direct effects were found for the other three well-being indicators (except for a marginally significant negative effect of the intervention on burnout). As more stable indicators of well-being, satisfaction with life, engagement, and burnout might be more difficult to change and might require longer interventions with obligatory follow-up meetings and assignments (cf. literature on transfer of training; Baldwin & Ford, 1988) for direct effects to become visible. Life satisfaction, for instance, has been found to be stable over time for a majority of people, and the minority of people who display alternating levels of satisfaction with life have usually undergone considerable changes in life circumstances such as losing their job or spouse (Fujita & Diener, 2005). In the light of this, a

half-day strengths intervention as used in the present study might just not be enough to influence the salient information a person accesses when appraising his or her overall life circumstances (Diener et al., 1985). In line with this assumption, it has been found that satisfaction with life could be enhanced through an extensive, 12-week strengths intervention (Rust et al., 2009), but not through a relatively short, three-week online intervention (Mitchell et al., 2009). Similarly, short interventions without comprehensive, binding follow-up sessions will have only limited, direct effects on burnout because mitigating burnout requires behavioral change, and because behavioral change, in turn, requires repeated stimulation and feedback, time to practice, and the opportunity to familiarize oneself with new behaviors (Leiter & Maslach, 2014). A more extensive intervention might also be required to directly impact work engagement, because work engagement depends on having the opportunity to actually apply one's strengths at work (Harzer & Ruch, 2013). While the strengths intervention used in this article aimed to stimulate the development and use of individual strengths at work, we do not know whether the participants were successful in working on their strengths after the intervention. The actual application of strengths probably hinges on boundary conditions such as person-job fit, receiving support of supervisors and/or colleagues, and job autonomy (Baldwin & Ford, 1988).

Finally, not finding direct effects of the strengths intervention on work-related well-being might also be partly explained by the participants' high initial level of engagement and low level of burnout. If participants of an intervention are already doing well, it is difficult to achieve further improvements in their well-being. In line with this reasoning, a meta-analysis has revealed that positive interventions such as strengths interventions have a stronger, beneficial effect on samples of clinically depressed people (Sin & Lyubomirsky, 2009), and the same might be true for burnout. Even if there were actual changes in both engagement and burnout after the strengths intervention, it might be impossible to capture them on the scales we used given the very high/low baseline scores (ceiling effect; Wang, Zhang, McArdle, & Salthouse, 2008).

Theoretical and Practical Implications

The present study aimed to contribute to the theoretical understanding of strengths interventions and the way they function in the organizational context. Along general lines, we found support for propositions derived from the positive-activity model (Lyubomirsky & Layous, 2013), namely for the positive effect of strengths interventions on the well-being of working people and the mediating role of positive affect in this regard. However, while we did find direct effects on indicators of general well-being (positive affect and PsyCap), we only found an indirect but not a direct effect of the strengths intervention on the two indicators of work-related well-being (engagement and burnout). Building on research that highlights the importance of actually having the opportunity to apply strengths at work (e.g., Harzer &

Ruch, 2013), we reason that strengths interventions might only be beneficial for work-related well-being if certain conditions are met. One the one hand, the intervention must succeed in motivating the participants to develop and use their strengths at work. On the other hand, even if the participants are motivated, the work context must allow for the application of their strengths. In the worst case, a strengths intervention could actually have detrimental effects on work-related well-being if employees discover that there is a bad fit between their current job and their strengths. Building on this, we suggest that the applicability of strengths at work might be a meaningful moderator that alters the relationship between strengths interventions and work-related well-being.

In addition to contributing to theory, this study makes a practical contribution by showing that even a very brief strengths intervention can significantly enhance employee positive affect and psychological capital as indicators of an employee's general well-being. In addition, these interventions favorably impact an employee's work-related well-being via short-term increases in positive affect. In other words, strengths interventions can be used as an organizational tool to promote and protect the well-being of employees, which is a main priority for many employers (Murphy, 2014). In addition, organizations might consider increases in PsyCap as valuable, because prior research has shown that developing PsyCap leads to higher individual performance (Luthans et al., 2010). Along similar lines, we reason that strengths interventions will result in even greater benefits if they are conducted in organizations that are characterized by a strengths-based climate, that is, a climate in which individual strengths are appreciated and in which employees get the chance to develop and use their strengths (van Woerkom & Meyers, 2014). Research has shown that such a climate is not only related to higher employee well-being, but also to higher in-role and extra-role performance (van Woerkom & Meyers, 2014).

Limitations and Directions for Future Research

The present study is subject to limitations concerning the sample size, the research model, and the research design. First, the sample size of N=116 is small in comparison to many cross-sectional or longitudinal studies, and a small sample diminishes the statistical power of the analyses. However, the sample size is reasonable given that a field experiment with three measurement points requires a much higher time investment than cross-sectional survey research. Second, we investigated only one of four possible mediators proposed by the positive-activity model (Lyubomirsky & Layous, 2013). While we did investigate the mediating role of positive affect, we did not measure positive thoughts, positive behaviors, or need satisfaction. In this exploratory study, we chose to focus on positive affect only because available theory and research evidence indicated that it might be the key mechanism through which strengths interventions operate. Building on the results of this study, we do, however, suggest that future research also takes into account the other three potential mediators the model comprises. Third, participants in this study were not randomly assigned

to the experimental and waitlist-control groups, because working people might drop out of a study if they cannot choose a training date that fits their work schedule themselves. As the participants did not know that the training groups they could subscribe for differed in terms of their status in this research project, we can assume that the procedure comes close to a random allocation. Comparisons of the pre-intervention scores of the experimental and control group on the study variables corroborated this assumption. A final limitation regarding the research design concerns the limited follow-up period. We followed participants over the period of a month in this study, but it would be advisable to expand the period to at least six months in future research so that longer-term effects can be captured.

CONCLUSION

Strengths interventions appear to be a purposeful tool that can be used in work contexts to benefit the employees in terms of increased well-being. However, there is still much to be learned about strengths interventions for employees, the range of their effects, their operating mechanisms, and the boundary conditions under which they work best. We therefore strongly encourage research that further investigates the application of these positive interventions in the organizational contexts.

CHAPTER 7

ENHANCING PSYCHOLOGICAL CAPITAL AND PERSONAL GROWTH INITIATIVE: WORKING ON STRENGTHS OR DEFICIENCIES?

ABSTRACT

Personal growth initiative (PGI), defined as being proactive about one's personal development, is critical to graduate students' academic success. Prior research has shown that students' PGI can be enhanced through interventions that focus on stimulating developmental activities. Within this study, we aimed to investigate whether an intervention that stimulates development in the area of one's personal strengths (strengths intervention) has more beneficial effects on students' PGI than an intervention that stimulates development in the area of individual deficiencies (deficiency intervention). We conducted two longitudinal field experiments to investigate the effects of the two interventions on students' PGI (Experiment 1) and the potential mediating role of psychological capital (PsyCap) in this regard (Experiment 2). In Experiment 1, one hundred-five (*N*=105) university students participated in either a strengths intervention or a deficiency intervention. Results indicated that the strengths intervention increased the students' PGI in the short- but not in the long term, whereas the deficiency intervention did not affect PGI. Ninety students (*N*=90) participated in Experiment 2, in which we slightly refined both interventions by putting a stronger emphasis on the ongoing development of strengths (strengths intervention) or correction of deficiencies (deficiency intervention) by adding post-training assignments. Results suggested that participating in both interventions led to increases in PGI over a three-month period, but that these increases were bigger for the strengths intervention group. Furthermore the relationship between the strengths intervention and PGI was mediated by hope as one component of PsyCap.

Keywords: higher education, personal growth initiative, positive psychology, psychological capital, strengths interventions

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INTRODUCTION

A positive and proactive stance towards change and continuous self-improvement, in other words personal growth initiative (PGI), is a critical resource for today's graduate students facilitating not only academic but also future career success. The critical role of PGI for students can be underpinned by three key arguments. First, research evidence corroborates that PGI favorably affects students' psychological, social, and emotional well-being while they are at the university (Robitschek & Keyes, 2009), and triggers them to actively explore different career opportunities (Robitschek & Cook, 1999). Second, scholars have reasoned that personal growth initiative facilitates the transition from university to employment because students with high levels of PGI are certain about their roles in life, know what their career goals are, and pin down action points that will help them reach their goals (Stevic & Ward, 2008). Finally, personal growth initiative is said to help individuals to cope with the multitude of challenging situations requiring change and adaptation, which they will inevitably encounter throughout their careers (Robitschek, 1998; Robitschek et al., 2012).

Results of prior research indicate that PGI of students can be enhanced through purposeful interventions, in particular, through interventions that stimulate personal growth (Thoen & Robitschek, 2013). However, individuals can either grow by overcoming their deficiencies or by building up their strengths, and this differentiation has, to our knowledge, not been considered in prior research. We hypothesize that interventions that aim at building up strengths (strengths interventions) as well as interventions that aim at overcoming deficiencies (deficiency interventions) will have positive effects on the participants' PGI, but that these effects will be stronger for strengths interventions. The reason why we expect more pronounced effects for strengths interventions is that employing strengths has theoretically been linked to intrinsic motivation and fast learning (Peterson & Seligman, 2004), which, in combination, facilitate the intentional pursuit of growth activities. We furthermore hypothesize that the positive effects of the strengths intervention on PGI will be mediated by psychological capital (PsyCap), a state-like higher-order construct encompassing self-efficacy, optimism, hope, and resilience (Luthans et al., 2007). Again, we expect stronger effects for the strengths intervention, because working on strengths enhances the participants' confidence, success expectations, perseverance, and the ability to cope with setbacks (Govindji & Linley, 2007), which, in turn, trigger proactive behaviors with regard to one's personal growth (Ogunyemi, 2007).

To investigate our research hypotheses, we conducted two field experiments in which we compared the effects of a strengths- and a deficiency intervention on graduate students' personal growth initiative (Experiment 1 & 2) and PsyCap (Experiment 2). In doing so, the present paper contributes to literature on personal growth initiative by aiming to explore how PGI-enhancing interventions should be designed in order to achieve optimal outcomes. To the best of our knowledge, this study is the first to address the question whether effects

on PGI might arise due to an intervention's general focus on personal development and growth, or whether the effects depend on the content and focus of the intervention. On a related note, this paper is among the first to investigate PsyCap as a potential operating mechanism through which PGI-enhancing interventions work, which will enhance our understanding of how to design or frame these interventions even further.

PERSONAL GROWTH INITIATIVE

Personal growth initiative (PGI) has been defined as the "active, intentional engagement in the process of personal growth" (Robitschek, 1998, p. 184), and can be understood as a developed set of skills that helps people to work towards self-change (Robitschek et al., 2012). By definition, the construct is multi-dimensional and encompasses cognitive as well as behavioral components (Robitschek et al., 2012). That means that, on the one hand, people with high scores on PGI can be characterized by a readiness or preparedness for change and by the ability to make specific plans with regard to their personal growth (cognitive components). On the other hand, they have the ability to seek out and use external resources that might help them grow, and display intentional or purposeful behaviors directed at self-change (behavioral components; Robitschek et al., 2012; Weigold, Porfeli, & Weigold, 2013).

In line with the conceptualization of PGI as a developed and thus modifiable set of skills (Robitschek et al., 2012; Weigold et al., 2013), two empirical studies have shown that PGI can be enhanced through interventions (Robitschek, 1997; Thoen & Robitschek, 2013). The first of these studies found that adults who were seeking life or career change experienced significant increases in PGI after participating in an 8-15-day wilderness experience program. This program consisted of outdoor activities that helped participants to get to know themselves and to explore their perceived limits (Robitschek, 1997). In the second study, Thoen and Robitschek (2013) designed a one-week training intervention that explicitly aimed at increasing personal growth initiative (Intentional Growth Training). To this end, student participants were introduced to theory about intentional personal growth and were asked to plan and carry out a personal growth activity that would urge them to step out of their comfort zone (Thoen & Robitschek, 2013). Results suggested that the latter part, planning and carrying out a personal growth activity, was the key to enhancing PGI, which was explained by the assumption that "experiencing (and surviving) the discomfort associated with engaging in something challenging, for the purpose of personal growth, leads to an increase in PGI" (Thoen & Robitschek, 2013, p. 160). Building on this, the present study focusses on enhancing PGI through the stimulation of personal growth activities.

ENHANCING PGI THROUGH PERSONAL GROWTH ACTIVITIES: FOCUSING ON STRENGTHS OR DEFICIENCIES?

Traditionally, interventions targeting personal growth and development have had a focus on the weak characteristics and abilities of individuals, and have often departed from a needs- or problem analysis in which actual and desired end states were compared (Swanson & Holton III, 2001). In contrast to this traditional approach, recent advancements in positive psychology, which is the research field dedicated to positive qualities in life (Seligman & Csikszentmihalyi, 2000), have inspired scholars to advocate the benefits of personal growth in the area of individual strengths (Buckingham & Clifton, 2001). Personal growth activities meant to enhance PGI might thus either focus on identifying and correcting individual deficiencies or on identifying and building up strengths.

On the one hand, one could argue that the focus of a personal growth activity does not matter, because stimulating development—no matter whether it regards building on strengths or mending deficiencies—will lead to increases in participants' growth or incremental mindsets, that is, the inherent believe that people or characteristics of people can change (Dweck, 2012). Research has shown that increases in growth mindsets positively predict the search for learning opportunities, self-regulation, and goal striving (Dweck, 2012), so that a link between a change in incremental mindset and PGI is possible. On the other hand, stimulating either the development of strengths or the remedy of deficiencies might trigger different motivational processes leading to different effects on PGI. For instance, while developing strengths might trigger students to engage in personal growth because employing strengths is an energizing experience in itself (Govindji & Linley, 2007; Peterson & Seligman, 2004), developing deficiencies might enhance PGI because mastering difficult tasks boosts students' positive affective responses and engagement in learning activities (Guskey & Pigott, 1988). To our knowledge, prior research has not yet explored these possible differences between growth activities directed at correcting deficiencies or at building up strengths.

When closely inspecting the curriculum of a social sciences master's program at our university, we saw an opportunity to close this gap in research. In line with the traditional approach towards growth, graduate students in this program used to receive a one-day personal skills training directed at preparing them for the labor market. In the context of this training, they identified gaps between their current level of skills and the skills that are required in their future jobs, and were stimulated to work on these identified areas for improvement. In other words, they were stimulated to engage in growth activities directed at correcting deficiencies (deficiency intervention). Inspired by positive psychology, we then developed another, comparable one-day training intervention that also aimed at preparing students for the labor market, but in which students identified their strong points and were encouraged to work on them. In the context of this intervention, students were thus

stimulated to engage in growth activities directed at further enhancing their strengths (strengths intervention). In the following, the expected effects of both strengths and deficiency interventions on PGI will be described in more detail.

Individual Deficiencies, Deficiency Interventions, and Effects on PGI

Deficiencies can be defined as ways of behaving, thinking, or feeling which do not come natural to an individual, which he or she does not enjoy doing, but in which he or she can achieve competent functioning if trained accordingly (cf. definition of strengths by Quinlan et al., 2012). Training interventions that are directed at mending deficiencies encompass two important components. First, individual deficiencies have to be identified based on a thorough problem- or needs analysis in which the present individual performance is compared to desirable performance standards (Moore & Dutton, 1978; Swanson & Holton III, 2001). Second, the gaps between the actual and desirable performance of training participants are narrowed through practice which can take place during the training setting itself, in another safe (virtual) learning environment, or in a real-life context (e.g., on the job for employees). In order to increase the transfer of training, a time slot needs to be reserved for setting individual goals, and for making a plan that specifies how training participants can further work on correcting their deficiencies after the training (Burke & Hutchins, 2007).

Based on goal-setting theory (Locke & Latham, 1990; Locke & Latham, 2002), we expect a positive effect of deficiency interventions on personal growth initiative. Participants of a deficiency intervention set individual-level goals regarding the desired levels of performance they want to achieve, which triggers a number of mechanisms that are conducive to personal growth initiative. When individuals set goals for themselves, they will direct more attention and effort towards goal-related activities (Locke & Latham, 2002). In addition, setting goals energizes individuals and increases their persistence when facing difficult tasks (Locke & Latham, 2002), which might translate into devoting more effort to their personal development. Even though working on deficiencies can be tedious and challenging at times, we expect that students are willing and motivated to work on their shortcomings because they are aware of the fact that this will increase their chances of finding a job and succeeding when entering the labor market. Pursuing an important and personally meaningful goal such as increasing one's employability, in turn, is said to further enhance the beneficial effects of goal-setting (Locke & Latham, 1990; Locke & Latham, 2002).

Evidence for the effectiveness of development based on deficiencies stems from research on mastery learning, a group-based approach to teaching in which the same performance standards are defined for the whole group, and in which individuals who fail to meet these standards receive extra attention, tutorials, practice time, and feedback until they do. Meta-analyses revealed that mastery learning benefits students' academic performance, engagement in and time spent on learning activities, as well as positive affective variables such as students' academic self-concept, grade expectations, and attitudes towards the

subject under study (Guskey & Pigott, 1988). Building on the above theoretical and empirical arguments, we formulated the following hypothesis:

> *Hypothesis 1:* Participating in a deficiency intervention leads to increases in personal growth initiative.

Individual Strengths, Strengths interventions, and Effects on PGI

Individual strengths have been defined as "ways of behaving, thinking or feeling that an individual has a natural capacity for, enjoys doing, and which allow the individual to achieve optimal functioning while they pursue valued outcomes" (Quinlan et al., 2012, p. 1146). In our understanding, there neither is a fixed number of strengths, nor are there strengths that are more or less beneficial: We reason that individuals simply benefit from developing and using whatever strengths they possess. Strengths interventions are processes that aim at increasing individual well-being and performance by helping individuals to identify their strong points and by stimulating strengths use and development (Quinlan et al., 2012). More specifically, strengths interventions typically start by strengths identification exercises such as gathering feedback on strong points from one's surrounding (cf. reflected best self exercise; Spreitzer, Stephens, & Sweetman, 2009), and proceed with exercises directed at the development of strong points (Biswas-Diener et al., 2011). In addition, strengths intervention comprise a third component, strengths use, which usually aims at encouraging individuals to use their most prominent strengths either more often or in new ways (Seligman et al., 2005).

A review of prior research on strengths interventions has shown that they consistently result in well-being gains for children, adolescents, and adults, with small to moderate effect sizes (for a review, see: Quinlan et al., 2012). Informed by several theoretical and empirical arguments, we moreover reason that strengths interventions can be used as a tool to enhance PGI. First and foremost, strengths interventions stimulate participants to set individual-level goals regarding the development and use of their strengths, so that the same PGI-enhancing mechanisms that were described in the context of the deficiency intervention will apply to the strengths intervention (Locke & Latham, 2002). Furthermore, we argue that focusing on growth in the area of an individual's strengths is particularly beneficial because strengths researchers claim that individuals have an intrinsic motivation or a sense of yearning for developing and using their strengths (Govindji & Linley, 2007; Peterson & Seligman, 2004). Individuals who put effort into strengths development will soon detect learning progress because learning curves tend to be steep when people get the chance to further develop their best skills and abilities (Peterson & Seligman, 2004). These initial learning successes are likely to further motivate students to develop themselves. Working on strengths has moreover been found to create energy, vigor, and vitality (Govindji & Linley, 2007; Wood et al., 2011), which can serve as the driving force for intentional growth and development. Based on the theoretical and empirical arguments presented above, this study will test the following research hypothesis:

> *Hypothesis 2:* Participating in a strengths intervention leads to increases in personal growth initiative.

Comparing the Effects of Deficiency and Strengths Interventions on PGI

While we expect that both the deficiency- and the strengths intervention trigger PGI because they stimulate participants to set personally meaningful goals (Locke & Latham, 2002), strengths interventions should exert a bigger positive effect on PGI because, as mentioned in the previous paragraph, developing and using strengths is inherently enjoyable, energizing, and motivating (Peterson & Seligman, 2004). Adding these effects to the positive effects of goal-setting, growth activities directed at building up strengths should lead to more intentional engagement in the process of personal growth than growth activities directed at correcting deficiencies. Building on this, we formulated the following hypothesis:

> *Hypothesis 3:* Participating in a strengths intervention leads to higher increases in personal growth initiative than participating in a deficiency intervention.

THE EFFECTS OF INTERVENTIONS THAT STIMULATE PERSONAL GROWTH ON PSYCHOLOGICAL CAPITAL (PSYCAP)

We reason that next to increasing PGI, interventions that focus on personal development will also increase an individual's psychological capital defined as:

> An individual's positive psychological state of development and is characterized by: (1.) having confidence (self-efficacy) to take on and put in the necessary effort to succeed at challenging tasks; (2.) making a positive attribution (optimism) about succeeding now and in the future; (3.) persevering toward goals, and when necessary, redirecting paths to goals (hope) in order to succeed; and (4.) when beset by problems and adversity, sustaining and bouncing back and even beyond (resiliency) to attain success. (Luthans, Youssef, & Avolio, 2007, p. 3)

By definition, PsyCap is a state-like construct that can be developed through purposeful interventions (Luthans et al., 2007). Personal growth interventions such as both the strengths and the deficiency intervention are likely to enhance psychological capital because they lead to mastery experiences as a consequence of the learning process, and because mastery experiences, in turn, are an important predictor of self-efficacy (Bandura, 1977). Similarly, these interventions invite participants to set self-concordant learning goals, which is a useful means to increase hope (Luthans et al., 2008). Furthermore, learning to master new tasks and assignments creates positive expectations regarding the outcomes of future learning endeavors (optimism). Finally, personal growth interventions might increase students' resilience, because they foster the belief that a person or characteristics of a person can change (cf. growth mindsets), which might help students to deal with and overcome setbacks

(Dweck, 2012). As these theoretical arguments are applicable to both types of interventions we investigated in this research, we formulated the following two hypotheses.

> *Hypothesis 4:* Participating in a deficiency intervention leads to increases in psychological capital.
>
> *Hypothesis 5:* Participating in a strengths intervention leads to increases in psychological capital.

Comparing the Effects of Deficiency and Strengths Interventions on PsyCap

Even though we expect that both interventions have a positive effect on psychological capital, we assume that the effects of the strengths interventions on PsyCap will be stronger than the effects of the deficiency intervention. The main reason for our assumption is the likelihood or frequency of mastery experiences triggered through the interventions. Strengths interventions do not only foster future mastery experiences such as other personal growth interventions, they also emphasize past mastery experiences during the strengths identification process. This additional emphasis on past successes should not only lead to an additional boost in self-efficacy (Bandura, 1977), but might also foster optimism and hope regarding future successes (Luthans, Avey, & Patera, 2008). Furthermore, mastery experiences are likely to occur very quickly when people develop their strong points, because people learn effortlessly and swiftly when the learning material builds on their strengths (Buckingham & Clifton, 2001). Developing deficiencies, by contrast, is more tedious and often requires numerous practice trials before a new task is finally mastered (Buckingham & Clifton, 2001; Ericsson et al., 1993). In addition, strengths can be understood as personal assets that can buffer against stressors and help to overcome setbacks (Park, 2004). That is, for instance, an individual scoring high on humor can make use of this strength to cheer him-/herself and others up when facing difficulties. Therefore, raising awareness for and further building on one's strong points by means of a strengths intervention might be related to additional increases in resilience (Luthans et al., 2007).

Based on the theoretical reasoning, we expect the following:

> *Hypothesis 6:* Participating in a strengths intervention leads to higher increases in PsyCap than participating in a deficiency intervention.

THE MEDIATING ROLE OF PSYCAP IN THE RELATIONSHIP BETWEEN STRENGTHS INTERVENTIONS AND PGI

Even though we do expect a small positive effect of the deficiency intervention on PsyCap, we assume that only the strengths intervention produces a positive effect on PsyCap that is strong enough to trigger subsequent gains in PGI. A positive effect of PsyCap on PGI can be expected based on the argument that PsyCap can serve as a core motivating force in the academic domain (Siu, Bakker, & Jiang, 2013). It has been argued that students scoring high

on PsyCap expect positive outcomes and believe that they can successfully obtain desired results (Luthans et al., 2007). Consequently, these students are more likely to intensify their learning efforts and to initiate growth processes than students who score low on PsyCap. In fact, it has been found in prior research that self-efficacy, a sub-component of PsyCap, predicts personal growth initiative of university students (Ogunyemi, 2007). Similarly, the better a students' ability to cope with setbacks, that is, the higher their resilience, the more willing they will be to take the risk of practicing new behaviors or exploring new (career-related) opportunities. Furthermore, the PsyCap component hope enables students to identify pathways towards reaching their developmental goals and energizes the subsequent goal-pursuit (Siu et al., 2013). In this sense, hope and PGI share some conceptual overlap because the two constructs are both oriented towards the future and involve setting clear goals, making plans to reach goals, and being ready to implement the plans that have been made (Shorey, Little, Snyder, Kluck, & Robitschek, 2007). Research has, however, shown that they are distinct constructs: While hope captures global, positive expectations about achieving goals, PGI encompasses a more narrow focus on achieving goals regarding personal (life) change (Shorey et al., 2007). Hope has also been defined as a purely cognitive construct capturing an individual's determination to reach goals and the belief that one can draw up pathways towards one's goals (Snyder et al., 1996), whereas PGI encompasses cognitive and behavioral components (Robitschek et al., 2012). In fact, it has been argued that the active and intentional pursuit of personal growth lies at the very heart of PGI (Robitschek et al., 2012), so that it can be clearly set apart from hope. Building on this, we reason that strengths interventions evoke hope—as a cognitive set that relates to broad goal-directed thinking (Snyder et al., 1996)—, which then initiates thoughts about goals with regard to personal change processes as well as intentional behaviors to achieve these specific goals. To the best of our knowledge, empirical studies on the effects of PsyCap as a whole on PGI are still lacking to date. However, initial empirical research supports the relationship between PsyCap and academic motivation and success (Luthans, Luthans, & Jensen, 2012; Siu et al., 2013). Similarly, our knowledge regarding mechanisms through which strengths intervention operate is still limited due to a lack of empirical studies (Quinlan et al., 2012). When investigating personal growth initiative as an outcome variable it can, however, be expected that psychological capital acts as a mediator, because positive psychology interventions have been found to increase PsyCap (Luthans, Avey, & Patera, 2008), and because subcomponents of PsyCap have been linked to PGI before (Ogunyemi, 2007; Shorey et al., 2007). Based on the above reasoning, we formulated the final research hypothesis.

> *Hypothesis 7:* The positive relationship between participating in a strengths intervention and personal growth initiative is mediated by PsyCap.

EXPERIMENT 1

We conducted Experiment 1 as a pilot study to test and refine the strengths- and deficiency intervention. In addition, we used this study as an initial test of Hypothesis 1 to 3 regarding the positive effect of the interventions on personal growth initiative.

Method

Participants and procedure

We conducted a longitudinal field experiment with three measurement waves (t0=baseline, approximately one week before the intervention, t1=immediate post-measurement, t2=one-month follow-up). A cohort of graduate students (*N*=114) in a social sciences master's program at a Dutch university participated in the study. 74.6% of the participants were female and their mean age was 23.22 years. Most of the students (*N*=105) filled in all three research questionnaires (attrition rate = 7.9%). An attrition analysis revealed that there were no significant differences between the students who left and the students who remained in the study.

The field experiment was conducted within the context of an obligatory course aiming at the development of personal skills. All students of the program in question were invited to enroll in one of the eight seminar groups of this course without knowing that the course content would differ across the groups. Four of the eight groups received a one-day training focusing on strengths, hereafter referred to as the strengths intervention (*N=52)*. The other four groups received a one-day training focusing on areas of improvement, hereafter referred to as the deficiency intervention (*N=53)*. Both trainings were classroom trainings and had between 12 and 15 participants. We worked with two experienced trainers, who both facilitated two strengths intervention groups and two deficiency intervention groups respectively. Trainers were briefed about the fact that we conducted research and that we aimed to investigate how the two interventions affected students differentially without referring to specific expectations or hypotheses. We checked the official course evaluations to see whether the students evaluated the two trainers or the courses differently, but found no differences between them.[1]

The strengths intervention. Before participating in the strengths training, students gathered feedback on situations in which they used their strengths and excelled from five to seven people in their surroundings (cf. reflected best self exercise; Spreitzer et al., 2009). The one-day training intervention itself comprised four major tasks focusing on strengths. First,

[1] To comply with ethical standards, we made sure that all students had received the same two trainings before graduating. After data gathering for our study was completed, students who had participated in the strengths intervention therefore participated in the deficiency intervention and vice versa.

students had to discuss their own strengths within a small group, followed by an individual reflection on strengths. Second, they got the task to design an individual promotion poster highlighting their strengths and how they use them in their daily lives. Third, they worked in groups to compare their own strengths profiles to multiple requirement profiles of recently published job vacancies that corresponded to their educational background. Students were asked to think about how they could use and develop their strengths in order to optimize the fit between them and the function(s) in question. Fourth, we asked them to work on developing a thirty-second elevator pitch, in which they briefly emphasized their greatest strengths, and explained how they can use them for their imagined first job.

The deficiency intervention. Before participating in the intervention, students filled in a paper-pencil test about the way in which they are normally dealing with (non-escalated) conflict situations that arise in everyday interpersonal communication (De Reuver, 2003). We chose this focus for the preparatory assignment because adequate communication and interpersonal skills are crucial for the future career of social sciences students, and because experience has told us that students have difficulties in this domain. Again, the training itself consisted of several major parts. First, students determined their core qualities, pitfalls, and challenges according to the core quality theory (Ofman, 2004), similar to a SWOT analysis. Within small groups, they subsequently discussed how they could overcome their pitfalls, which result from overusing strengths, by focusing on their challenges. Second, the results of the conflict handling style test were discussed, and again the focus was put on overcoming the current shortcomings according to the test. Based on both diagnostic tests students formulated their individual learning goals. Third, students were asked to practice their deficiencies with regard to interpersonal communication in different role-plays and to give constructive feedback to one another. Fourth, they were introduced to theory on resolving difficult social situations through intervening on different levels. Again, we asked them to practice applying this theory in role plays during the training and to reflect on possibilities for improvement.

Comparing the two interventions. We designed both trainings in such a way that they were comparable with regard to several components: most notably their length, their amount of social interaction, their amount of personal reflection, and their explicit focus on the participants' present (being a successful student) and future (being a successful employee) roles. In particular, both interventions were framed as trainings to prepare students for entering the labor market, and students were explicitly asked to reflect on either strengths or weaknesses that they would like to work on in order to improve their chance of success in their first job. However, the interventions also differed in some regards. First, the strengths interventions made use of a preparatory assignment in which participants gathered feedback from others to identify their strong points, whereas the deficiency intervention included a paper-and-pencil test to identify weak points in interpersonal communication. We did not ask the participants to gather feedback on their weak points, because we wanted to

avoid that they would start the training with the negative feeling that this might cause. Second, the deficiency intervention had a more explicit focus on deficiencies with regard to interpersonal communication than the strengths intervention. However, in practice both interventions did not really differ with regard to this aspect. The deficiency intervention also included the identification of and reflection on more general areas for improvement (cf. core quality exercise; Ofman, 2004). In addition, the strengths intervention also led to the identification of many strengths with regard to interpersonal communication, due to its focus on skills that are relevant for the students' potential first job, and due to the fact that social sciences graduates need interpersonal skills in their careers. Third, one might assume that the tone of the deficiency intervention was much more negative than that of the strengths intervention, and that the deficiency intervention was much more challenging. We did, however, pay careful attention to talk about deficiencies in a positive way, that is, to interpret them in the light of 'chances' or 'opportunities' for improvement instead of individual shortcomings. Moreover, our experience has taught us that identifying and working on strengths can provide a much bigger challenge to students than working on deficiencies, as they are used to talk about their areas for improvement, but not about their areas of strengths.

Instruments

Personal growth initiative was measured by a nine-item scale developed by Robitschek (1998). A sample item is 'I have a good sense of where I am headed in my life'. Items were answered on a six-point Likert scale from one (1 = 'totally disagree') to six (6 = 'totally agree'). The originally English scale was translated into Dutch by means of a translation-back-translation procedure.[2] In line with validation studies of the original scale (Robitschek, 1998), an exploratory factor analysis (EFA) provided clear evidence for the one-factor structure of the scale. Cronbach's alpha values were adequate for all measurement points (α t0 = .83, α t1 = .81, α t2 = .89), in line with Cronbach's alphas reported for the original scale (Robitschek, 1998).

Data analysis

Prior to conducting the main analysis, we calculated intraclass correlation coefficients (ICC(1); Bliese, 2000) for PGI scores of the four strengths- and the four deficiency intervention groups at all three time points in order to check whether the nested nature of our data (students nested in intervention groups) posed a threat to the assumption of independence of observations. ICC's ranged between -.04 and .002 (median ICC(1) = -.03) for the deficiency intervention groups and between .05 and .18 (median ICC(1) = .08) for the strengths intervention group. In general, these small values indicate that there is little variance in PGI

[2] Dutch students received all questionnaires in Dutch, while a minority of international students (*N* = 23) filled in English versions of the questionnaires.

scores that is explained by group membership, meaning that the assumption of independence of observations has not been violated. Note that the only slightly higher ICC(1) value of .18 was found at baseline measurement before the groups got together for the first time. It is thus a likely artifact of non-random sampling, and not of differences between the training interventions. Subsequently, we used SPSS 19 to conduct a mixed between-within subjects analysis of variance (ANOVA) (Tabachnick & Fidell, 2007) with the experimental condition as a between-subjects factor and time as a within-subject factor.

Table 1

Means and Standard Deviations of PGI and the Four PsyCap Components across Measurement Points for Experiment 1 and Experiment 2

		Strengths Intervention		Deficiency Intervention	
Measurement Point	**Variable**	***M***	***SD***	***M***	***SD***
Experiment 1					
t0	PGI	4.20	.75	3.99	.61
t1	PGI	4.56	.61	4.04	.53
t2	PGI	4.17	.97	4.03	.65
Experiment 2					
t0	PGI	3.85	.71	3.78	.56
	Self-efficacy	3.80	.50	3.69	.46
	Hope	5.59	.94	5.56	.78
	Optimism	3.98	.49	3.72	.51
	Resilience	3.60	.64	3.39	.65
t1	PGI	4.27	.68	4.00	.58
	Self-efficacy	4.11	.44	3.84	.36
	Hope	6.07	.92	5.75	.84
	Optimism	4.10	.49	3.91	.53
	Resilience	3.72	.66	3.35	.62
t2	PGI	4.22	.73	4.06	.57
	Self-efficacy	3.95	.48	3.75	.46
	Hope	5.94	1.18	5.72	.89
	Optimism	4.09	.49	3.77	.53
	Resilience	3.70	.69	3.24	.67
t3	PGI	4.38	.65	4.01	.62
	Self-efficacy	4.15	.46	3.87	.43
	Hope	6.24	.95	5.81	.82
	Optimism	4.13	.56	3.90	.56
	Resilience	3.77	.63	3.33	.61

Note. PGI = Personal growth initiative; *M* = mean; *SD* = standard deviation; t0 = pre-intervention; t1 = post-intervention; t2 = one-month follow-up; t3 = three-month follow-up.

Results

A preliminary analysis revealed that there were no significant group differences on PGI at baseline measurement (t0) (F (1,106) = 2.59, p = .11). The mean values and standard deviations of PGI at the three measurement points for both groups can be found in Table 1.

Results of the mixed between-within subject ANOVA revealed significant main effects for both time (Wilks' Lambda=.83, F(2,102)=10.74, p<.001, partial η2=.17) and group (F(1,103)=7.06, p<.01, partial η2=.06). In addition, the time*group interaction effect was significant (Wilks' Lambda=.88, F(2,102)=7.19, p=.001, partial η2=.12), meaning that the changes in PGI over time were different for the two intervention groups. An interaction plot revealed that the strengths intervention group experienced gains in PGI at the post-intervention measurement, but did not maintain these gains over the one month follow-up period (see Figure 1a). These observations were backed up by paired-sample t-tests revealing that the strengths intervention group experienced a significant increase in PGI from t0 to t1 (t(54) = 5.19, p<.001), but no significant change in PGI from t0 to t2 (t(51)= .85, *ns*). PGI scores of the deficiency intervention group remained relatively stable over time, and paired-sample t-tests revealed no significant differences between the t0 score and respectively scores of t1 and t2 for this group.

Discussion (Experiment 1)

In our first experiment, we did not find any support for Hypothesis 1 regarding the positive effect of the deficiency intervention on PGI. Hypotheses 2 and 3, however, were partly corroborated by the results. We found that the strengths intervention led to significant short-term but not long-term increases in students' PGI, and that the strengths intervention had stronger effects on PGI than the deficiency intervention. Since we did not find long-term effects of either intervention, we reasoned that the transfer of training to the real-life learning environment might have been challenging for the student participants, and that, therefore, the interventions did not succeed in motivating students to keep on developing themselves. Consequently, we decided to add two post-training assignments to both interventions as a measure to facilitate the positive transfer of training (Wexley & Baldwin, 1986). Both assignments we used stimulated the reflection on either strengths or deficiencies, but while the first tool was a pure reflection exercise, the other tool was comparable to a reflective learning journal, which not only stimulates reflection but also encourages individuals to apply the knowledge they gained during the training (Brown, McCracken, & O'Kane, 2011).

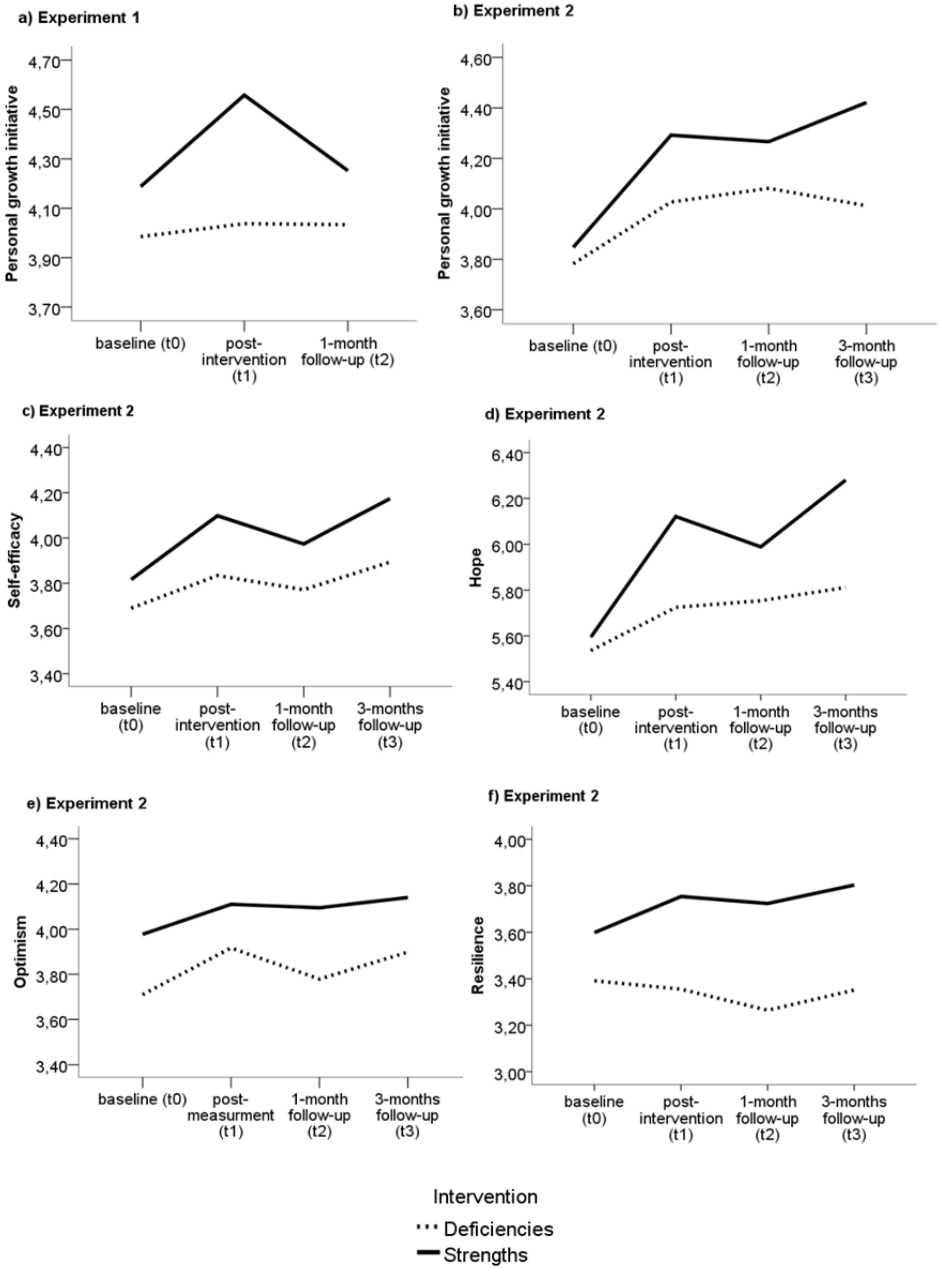

Figure 1. **Graphic representations of the changes in group means of PGI, self-efficacy, hope, optimism, and resilience over time for the strength and deficiency intervention groups**

EXPERIMENT 2

The purpose of Experiment 2 was to expand the results of the first experiment by exploring the direct effect of the strengths and deficiency interventions on PsyCap, as well as the indirect effect of the strengths intervention on PGI mediated by PsyCap.

Method

Experiment 2 and Experiment 1 are very similar in terms of the methods we used so that this section will only address the factors that differ between them.

Participants and procedure

Experiment 2 was a longitudinal field experiment with four measurement waves: baseline, approximately 1 week prior to the intervention (t0), post-intervention, immediately after the intervention (t1), one-month follow-up (t2), and an additional three-month follow-up (t3). All participants were master students of a social sciences program at a Dutch university (*N*= 98). For Experiment 2, we used the cohort that graduated one year after the cohort in Experiment 1 so that there was no overlap in participants. Seventy-nine percent (79%) of the sample was female and participants' mean age was 22.9 years. Of the initial participants *N*=90 filled in all four research questionnaires (attrition rate: 8.2%). We used the same procedure for recruiting study participants as in Experiment 1, but assigned students randomly to the two different interventions (*N*=46 for the deficiency intervention; *N*=44 for the strengths intervention). In Experiment 2, the two intervention procedures described under Experiment 1 were extended by two short post-training homework assignments that were comparable in terms of the required effort and matched the respective intervention goals. First, students had to hand in a short reflection on either their strengths or their deficiencies two weeks after the intervention. In both interventions, they were asked to freely choose strengths/deficiencies to focus on based on the insights they gained during the training and their own appraisal, while thinking about skills that would benefit them in their future career. Second, approximately two months after the intervention they had to hand in a journal, in which they described at least four situations in which they either developed and used their strengths, or worked on their deficiencies.

Measures

Personal Growth Initiative was measured by the same nine-item PGI scale by Robitschek (1998) as in Experiment 1. Cronbach's alpha values were adequate for all measurement points (α t0 = .75; α t1 = .80; α t2 = .83; α t3 = .83). The four *PsyCap* components were measured by the eight-item New General Self-efficacy Scale (Chen et al., 2001), the six-item revised Life Orientation Test (LOT-R measuring optimism; Scheier et al., 1994) translated into Dutch by (Klooster et al., 2010), the six-item State Hope Scale (Snyder et al., 1996), and the six-item Brief Resilience Scale (Smith et al., 2008). All scales except for the LOT-R, for which a

translation was available, were translated into Dutch by means of the translation-back translation procedure.[3] Sample items are 'I will be able to achieve most of the goals that I have set for myself' (self-efficacy); 'In uncertain times, I still expect the best' (optimism); 'At the present time, I am energetically pursuing my goals' (hope); and 'I have a hard time making it through stressful events' (resilience, reverse coded). In order to capture the state-like nature of the constructs, respondents were asked to indicate the extent to which they would agree with each of the items at the present moment. If necessary, scales were adapted by reformulating phrases in such a way that generalized statements ('usually', 'always', 'rarely', 'hardly ever') were omitted. All scales were scored on a 5-point Likert scale from one (1='strongly disagree') to five (5='strongly agree'), except for the State Hope Scale which had an 8-point answer scale from one (1 = 'strongly disagree') to eight (8 = 'strongly agree'). Our sample size did not allow us to investigate structural validity of the five Dutch scales by means of a confirmatory factor analysis (CFA), but we inferred information about the validity of the scales based on three other indicators. First of all, we conducted EFA's and these indicated that all scales (PGI, self-efficacy, hope, optimism, and resilience) had one-factor structures just as the original English scales. Second, the Cronbach's alpha values we found in this study were greatly in line with the values reported for the original scales, which indicates internal consistency of the scales (for self-efficacy: α t0 = .80; α t1 = .75; α t2 = .82; α t3 = .84; for hope: α t0 = .76; α t1 = .82; α t2 = .87; α t3 = .86; for resilience: α t0 = .83; α t1 = .84; α t2 = .87; α t3 = .84; , and for optimism: α t0 = .69; α t1 = .66; α t2 = .70; α t3 = .75). Third, we found that the correlations of our translated scales among each other are similar to what has been found in other studies based on the original scales (or validated translations of them). For instance, Shorey et al. (2007) reported a zero-order correlation of r = .65 between PGI and hope, which is in line with our findings (r_{t0} = .64). Smith et al. (2008) reported that their brief resilience scale correlated with r = .45 to r = .69 with the LOT-R, which is again comparable to our findings for the correlation between the same scales (r_{t0} = .44). Using validated Hebrew adaptations of the scales, Feldman, Davidson, and Margalit (2014) found correlations of r = .28 to r = . 43 between self-efficacy and hope (compared to r_{t0} = .51 in our study), of r = .28 to r = .52 between self-efficacy and optimism (compared to r_{t0} = .52 in our study), of r = .30 to r = .43 between hope and optimism (compared to r_{t0} = .48 in our study).

Analysis

In a first step, we checked whether our data violated the assumption of independence of observations by calculating ICC(1) values (Bliese, 2000) for PGI, self-efficacy, hope, optimism, and resilience at all four time points separately for the four strengths- and the four deficiency intervention groups. ICC(1) values for all five study variables ranged from -.07 to

[3] Dutch students received all questionnaires in Dutch, while a minority of international students (N = 18) filled in English versions of the questionnaire.

.12 (median ICC(1) = -.002) for the deficiency group and from -.07 to .13 (median ICC(1) = -.02) for the strengths group. Out of 40 calculated ICCs, only three exceeded the threshold of marginal to small ICCs (<.10) (Bliese & Ployhart, 2002), which indicates that there is no serious threat to the assumption of independence of the data. In a second step, we conducted five mixed between-within subject ANOVA's to investigate the effects of the strengths intervention on PGI and the four PsyCap components over time. In addition, to investigate group effects on both PsyCap and PGI, and to investigate the potential mediating effect of PsyCap, we tested an autoregressive, cross-lagged model (Schlueter, Davidov, & Schmidt, 2007) in MPlus 7.1.

Results

Results of a between-group multivariate analysis of variance (MANOVA) with PGI, self-efficacy, hope, optimism, and resilience at baseline measurement (t0) as dependent variables indicated that there were no differences between the two groups on the combined dependent variable (Wilks' Lambda=.92, $F(5,85)=1.53$, $p=.19$; partial $\eta 2=.08$). When considering the results for the dependent variables separately, a significant group difference was found for optimism ($F(1,89)=6.19$, $p=.02$), with higher scores for the strengths intervention group. Means and standard deviations of PGI, self-efficacy, hope, optimism and resilience at all measurement points can be found in Table 1.

The results of the five mixed between- within-subject ANOVAs with PGI, self-efficacy, hope, optimism, and resilience as dependent variables are summarized in Table 2 and Figure 1.

We found significant time*group interaction effects for both PGI and hope, which indicates that the changes in these variables over time differed across the two experimental groups. Inspecting the interaction plots (Figure 1b and 1d) clarifies that both groups experienced gains in these variables over time (paired samples t-tests revealed that these increases were marginally significant or significant for both groups at all time points), but that these gains were bigger for the strengths intervention group. We also found a marginally significant time*group interaction effect for resilience. The interaction plot (Figure 1f) shows that only the strengths intervention group experienced gains in this variable over time (paired sample t-tests revealed that these increases were significant or marginally significant for all time points), whereas the deficiency intervention group experienced slight decreases (paired sample t-tests revealed a marginally significant decline from t0 to t2).

We did not find significant time*group interactions effect for self-efficacy and optimism, but we did find significant main effects of time for both variables. Interaction plots show that both groups displayed increases in these variables over time (see Figure 1c & 1e). Paired-sample t-tests revealed that the increases in self-efficacy and optimism over time were significant for both groups at all-time points (with the exception of non-significant changes from t0 to t2 for the deficiency group). Taken together, these results provide full support for

Table 2

Results of Mixed Between- Within-subject ANOVAs with Group as a Between-subject and Time as a Within-subject Factor with PGI and the four PsyCap Components as Dependent Variables

	Main Effect Time			Main Effect Group		Interaction Effect Time*Group		
Dependent variable	Wilks' Lambda	$F(df_1,df_2)$	partial η2	$F(df_1,df_2)$	partial η2	Wilks' Lambda	$F(df_1,df_2)$	partial η2
PGI	.61	18.16(3,84)***	. 39	3.81(1,86)$^{\#}$	.04	.89	3.46(3,84)*	.11
Self-efficacy	.64	15.87(3,85)***	.36	7.65(1,87)**	.08	.96	1.35(3,85)	.05
Hope	.69	13.05(3,86)***	.31	3.11(1,88)$^{\#}$	.03	.91	2.75(3,86)*	.09
Optimism	.77	8.57(3,86)***	.23	6.59(1,88)*	.07	.97	0.97(3,86)	.03
Resilience	.95	1.66(3,86)	.06	9.83(1,88)**	.10	.92	2.57(3,86)$^{\#}$	.08

Note. Partial η2 = partial eta-squared; $^{\#}$ p<.10; * p<.05; ** p<.01; *** p<.001.

Hypothesis 1, 2, 3, and 5 and partial support for Hypothesis 4 and 6. We found that participating in the strengths intervention group entailed increases in PGI and all four PsyCap components (Hypothesis 1 and 5), while participating in the deficiency intervention entailed increases in PGI, self-efficacy, hope, and optimism (Hypothesis 2 and 4). We furthermore found that increases in PGI, hope, and resilience were more pronounced for participants of the strengths intervention (Hypothesis 3 and 6).

When conducting two multiple regression analyses with respectively PGI at t2 and t3 as dependent variables and the four PGI components at either t1 or t2 as independent variables, we found that hope was the only significant predictor of PGI. These results combined with the results of the mixed between-within subject ANOVA's hint at the potential mediating role of hope in the relationship between the strengths intervention and PGI, and we therefore proceeded by fitting an auto-regressive cross lagged model (Schlueter et al., 2007) to our four-wave data on hope and PGI using MPlus 7.1. Four different cross-lagged models were analyzed, with and without the group effect, and allowing all cross-lagged and stability parameters to be free or restrict them to be equal across waves. The results from the most-restrictive well-fitting model are reported below (see Table 3 for model comparison).

Table 3
Model Comparison of four Different Autoregressive Cross-Lagged Models

Cross-lagged and autoregressive effects	Group effect	χ^2 *(df,p)*	RMSEA	CFI
Free	Absent	52.77 (14, .00)	.17	.92
Free	Present	54.22 (14, .00)	.17	.92
Equal	Absent	64.97 (22, .00)	.14	.91
Equal	Present	67.18 (22, .00)	.15	.91

Note: χ^2 = chi square; RMSEA = Root mean square error of approximation; CFI = Comparative fit index.

The final model (Figure 2) comprises the stability coefficients for hope and PGI, the mutual cross-lagged effects from hope to PGI and vice-versa, the direct effect of group on PGI, and the mediated effect of group on PGI via hope. Both the stability and the cross-lagged effects are set equal across measurement occasions. This model showed a good fit to the data (χ2= 67.18, df=22; RMSEA=0.15; CFI=0.91), which is not significantly worse than the fit of the model where cross-lagged and stability effects are free (χ2dif= 12.96, df=8, p=.11). Results indicate that both hope an PGI have a high stability over time (the standardized regression coefficients for hope are β_{t1}=.62; β_{t2}=.63; β_{t3}=.65; and for PGI are β_{t1}=.53; β_{t2}=.60; β_{t3}=.56). This shows that there is a high stability in the relative rank order of individuals between two or more points in time (Finkel, 1995; Schlueter et al., 2007).

The two alternative causal models for hope and PGI were investigated, that is either with PGI predicting hope or vice versa. Results revealed that hope has a significant cross-lagged effect on PGI (the standardized β is close to .20, p<.01). At the same time, PGI has no significant cross-lagged effect on hope (the standardized β =.04, p=.50). As such, the hypothesis that hope has an effect on PGI (and not the other way around) is supported. The expected mediation effect (Hypothesis 7) of hope in the relationship between the strengths intervention and PGI is also partially supported by the data. The group has a significant effect on hope at time 1 and 3 (both at time 1 and time 3 the effect is *β*=.17, p=0.02), but not at time 2 (*β*=-.01, p=.92). Thus, based on the significant direct effect of the strengths intervention on hope at t1, and the significant cross-lagged effect of hope t1 on PGI t2, we can conclude that hope at t1 mediates the relationship between the intervention and PGI at the one-month follow-up. As there is no direct effect of the strengths intervention on hope at t2, the mediating effect has not been supported for the relationship between the strengths intervention group and PGI at the three-month follow-up (t3). There is, however, a direct effect of the intervention on both PGI at post-measurement (t1) (*β*= .16, p=.04) and at the 3-month follow-up (t3) (*β*= .20, p<.01).

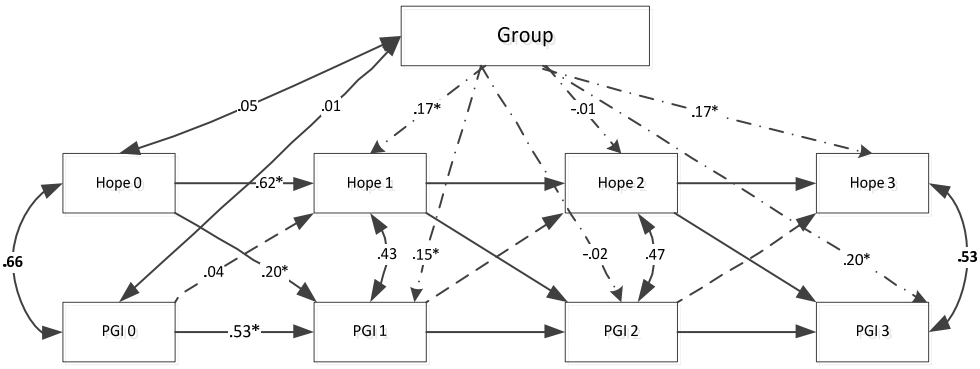

Figure 2: **Graphic representation of the final autoregressive cross-lagged model with standardized coefficients. Cross-lagged and stability effects are set equal across measurement occasions.**

DISCUSSION

The present study aimed to compare the effects of a strengths- and a deficiency intervention on graduate students' PGI and PsyCap. Results indicate that the students' scores on PGI, as well as on the PsyCap components self-efficacy, hope, and optimism, increased after participating in either one of the interventions. The increases in PGI and hope were found to

be bigger for participants of the strengths intervention. Similarly, participating in the strengths intervention entailed increases in resilience, the fourth PsyCap component, whereas participating in the deficiency intervention entailed slight decreases in this variable.

These findings are largely in line with our expectations about the positive effects of both interventions on PsyCap and PGI. The positive effects on PGI can be explained by the fact that both interventions stimulate personal development by asking participants to set meaningful goals with regard to their personal growth, and to engage in growth activities. Growth activities, in turn, supposedly lead to more intentional personal growth, because tackling and mastering challenging activities motivates individuals to develop themselves even further (Thoen & Robitschek, 2013). Similarly, setting meaningful goals contributes to PGI by facilitating proactive learning, drive, self-regulation and persistence (Locke & Latham, 2002). The fact that both interventions make use of goal-setting might also be an explanation for the positive effects of both interventions on PsyCap. Prior research has found that goal-setting is an effective way to enhance hope (Luthans et al., 2008). In addition, both intervention aim to induce mastery experiences, and these experiences help to create self-efficacy, as another PsyCap component (Bandura, 1977).

The effects that we found have to be interpreted with some caution because the present research did not include a no-intervention or placebo control group. One could therefore argue that the positive effects that became visible after both interventions are caused by the participants' interpretation of the (training) situation (e.g., their perception of being directed towards personal growth) and the adaption of their own behavior according to this interpretation (Adair, 1984). However, this argument cannot account for the fact that participants of the deficiency intervention experienced decreases in resilience but increases in all other PsyCap components, whereas participants of the strengths intervention experienced increases in resilience (as well as the other PsyCap components). We can explain this finding by theory—that is, only becoming aware of and using one's strengths provides individuals with the feeling that they have the necessary personal resources to deal with hardships (Park, 2004) —, but not by the assumptions that the interventions induced the participants to focus on developing their PsyCap. In addition, prior empirical studies comparing strengths interventions to placebo control interventions found support for the expected, positive effects of strengths interventions (Mitchell et al., 2009; Seligman et al., 2005).

The assumption that all research participants (irrespective of the group) were primed to focus on personal growth and PsyCap does not represent a good explanation for the fact that the strengths intervention had comparatively stronger positive effects on PGI and hope than the deficiency intervention either. One could argue that the two trainers might have expected that the strengths intervention would elicit more positive effects than the deficiency intervention, which would then influence their behavior during the training (e.g.

being more positive or supportive). However, this argument cannot account for the fact that both interventions had the same (positive) effect on self-efficacy and optimism. The latter finding also casts doubt on the possible allegations that the trainings might have differed in the conveyed tone or atmosphere, and that the deficiency intervention might have been a potential negative or frustrating experience for the participants. Based on anecdotal experience and the overall course evaluation, we know that the students appreciated and liked both interventions.

There were, however, some other differences in the interventions with a potential effect on the study outcomes. First, strengths were identified by means of feedback from others (combined with personal reflections), whereas deficiencies were identified by means of a paper-and-pencil test (combined with personal reflections). While feedback from others can be a powerful tool to boost short-term increases in positive affective responses (Spreitzer et al., 2009), the identification of either strengths or deficiencies was merely a precondition that helped participants identify the areas for personal development they would like to work on. The hypotheses about the effects of the interventions on PsyCap and PGI are much more based on the actual engagement in growth activities than on the process of identifying areas for growth. In line with the reasoning that the processes of strengths- and deficiency identification are only of limited influence, we found that putting a stronger emphasis on the ongoing engagement in personal growth by means of post-training assignments was necessary for maintaining initial gains in PGI over a longer period of time. Only after adding post-training assignments that encouraged the reflection on and ongoing application of training contents in Experiment 2 (Brown et al., 2011), did we see a positive effect of both interventions on students' PGI over a three-month period (cf. literature on transfer of training; Brown et al., 2011; Wexley & Baldwin, 1986). These findings can be a hint that reflecting on areas for improvement and opportunities for strengths use might raise the students' awareness for the general process of personal growth, which helps to transfer the insights gained from engaging in one particular growth activity to other domains (comparable to the effect of the educational component of the intentional growth training; Thoen & Robitschek, 2013). A second difference in the interventions that might have affected the results was the slightly stronger emphasis on developing interpersonal or communication skills in the deficiency intervention. Even though this focus was less explicit in the assignments of the strengths intervention, both interventions highlighted that students' should focus on developing strengths or deficiencies that would benefit them in their future career—and when it comes to careers of social sciences graduates, interpersonal skills are often a prerequisite. In the end, students in both interventions typically worked on at least one growth area related to interpersonal communication. We particularly would like to stress that students in both interventions had considerable freedom in choosing their own focus for the post-training assignments in Experiment 2. That is, the reflection on strengths/deficiencies and the strengths/deficiency journals could either

be based on the insights students gained during the training or their own assessment, as long as these assignments referred to skills that the students can apply in their potential first job.

Given these considerations, we do reason that the focus of growth activities matters. While encouraging students to engage in growth activities seems to be beneficial regardless of the focus (cf. Thoen & Robitschek, 2013), a focus on growth in the area of strengths appears to have an even stronger effect than growth in the area of deficiencies. This more pronounced effect can be explained by the inherently motivating features of strengths: working on strengths is said to make people feel good, energized, and invigorated (Peterson & Seligman, 2004), which can serve as the driving force for intentionally engaging in personal growth. Results also hinted at the potential mediating role of the PsyCap component hope in this regard. The analysis of cross-lagged effects clearly indicated that the strengths intervention had significant direct effects on both hope and PGI and that hope had a significant cross-lagged effect on PGI. PGI, by contrast, had no cross-lagged effect on hope. These findings are interesting in that they further our understanding of links between hope and PGI as two positive, future oriented constructs that are related to goal-setting (Shorey et al., 2007). Based on our results, it thus appears that the strengths intervention triggered hope in terms of general, positive thoughts about working towards and achieving one's goals (Snyder et al., 1996), which, in turn, induced individuals to intentionally work on their goals with regard to personal change (Shorey et al., 2007). Both the deficiency and the strengths intervention probably exert a positive effect on hope because participants set personally meaningful goals (Luthans et al., 2008), which produces goal-directed energy. In contrast to participants of the deficiency intervention, participants of the strengths-intervention might however be able to generate a higher number of pathways towards these goals. Similar to the broadening effect of positive emotions (Fredrickson, 2001), focusing on positive qualities such as strengths might lead to more broad-minded thinking, which results in stronger positive effects on hope, and, subsequently, on PGI.

Taken together, the results of this study provide an essential contribution to theory on personal growth initiative. On the one hand, it is another piece of evidence for the (at least partially) malleable nature of the construct which can be developed through interventions (cf. Robitschek, 1997; Thoen & Robitschek, 2013). On the other hand, this study emphasizes the fact that the choice regarding the focus of these interventions matters because we found bigger gains in personal growth initiative after an intervention with a focus on developing strengths as compared to a focus on overcoming deficiencies. Furthermore, the study shows that PGI-enhancing interventions can indeed be tailored to a specific context or specific needs (in our study: preparing students for the labor market) as was already suggested by Thoen & Robitschek (2013). We would even go so far as to suggest that interventions that aim to foster growth that is relevant to the individual might exert stronger effects than a general intentional growth training (Thoen & Robitschek, 2013), because research on goal-

setting has shown that personally meaningful goals are more powerful than other goals (Locke & Latham, 1990; Locke & Latham, 2002).

Based on our findings, we would advise universities to create more learning opportunities focusing on individual qualities, in particular for students who are about to graduate. Increases in students' personal growth initiative are highly desirable because it is an important set of skills predicting the effort students put into developing themselves and their overall attitudes towards learning and change (Robitschek et al., 2012). These attitudes not only benefit the students' success at the university, but can also boost their engagement in career exploration and development activities, which might eventually facilitate their transition to the labor market (Robitschek et al., 2012).

Limitations and Future Research

The presented research project is subject to several limitations. Next to the lack of a no-intervention our waitlist-control group, which we discussed earlier, a second limitation was that our research population and sample were skewed towards female participants which does not allow for a broad generalization of results. However, we have no reason to assume that results are only applicable to female participants because other studies on personal growth interventions with more gender-heterogeneous samples reported an overall positive effect of these interventions (e.g., Seligman et al., 2005). Third, our research was limited in terms of the time period of three months it covered. It would have been interesting to follow the graduate students over a longer period until after their graduation to further explore the effects of the personal growth interventions on the students' transition to the labor market. It might, however, be that achieving longer-term effects would only be possible with a more time-intensive intervention with several training moments spread over several weeks. Fourth, this study focused on the four PsyCap components as the only mechanisms that transmit the effect of strengths interventions to PGI, but other mechanisms can be thought of as well. For instance, in line with prior theory and research (Peterson & Seligman, 2004; Wood et al., 2011), it could be reasoned that focusing on strengths produces energy and vigor which fuel the process of ongoing self-development. Fifth, this study uses the original, one-dimensional personal growth initiative scale PGIS (Robitschek, 1998) because the refined PGIS-II (Robitschek et al., 2012) which captures four different components of PGI (using resources, intentional behavior, readiness for change, and planfulness) had not been published at the onset of this study. Therefore, we did not have the possibility to investigate whether the intervention had differential effects on the cognitive and behavioral PGI components, and how these components related to hope. Sixth, the research relied on Dutch translations of existing English scales that haven't been validated in prior research and that couldn't be extensively validated in the context of this study due to the small sample size. However, we found hints for strong internal consistency comparable to the original English scales, and we found that correlations between the variables in our study were comparable

to correlations found in other studies using the original scales. Seventh, our analyses cannot account for the nested nature of our data (individuals nested within training groups). When inspecting ICC(1) values of the study variables at all time points, however, we did not find hints for a violation of the assumption of independence of the data. A final limitation of our study concerns the small to moderate effect sizes which we found. These effect sizes are, however, in line with prior research on the effects of strengths interventions on well-being (Quinlan et al., 2012). Effect sizes might be enhanced through extending the intervention period, or embedding the intervention in a strengths-based curriculum in which several courses emphasize the value of individual strengths.

One of the important tasks for future research is to aim at the optimization of personal growth interventions so that higher gains in PGI can be achieved. Research designs should be optimized by including an experimental group that receives a combination of the strength and deficiency intervention. Exploring possibilities to combine strengths and deficiency interventions in the pursuit of optimal outcomes is essential because initial evidence points to the effectiveness of working on strengths and deficiencies simultaneously (Rust et al., 2009). Furthermore, it is necessary to gain more detailed insights into the effects of personal growth interventions on the four subcomponents of PGI, and to explore the full range of variables that mediate the relationship between these interventions and PGI. Exploring the different mechanisms through which either strengths or deficiency interventions work can help to optimize the content and focus of these interventions. Similarly, much research needs to be done on moderators of this relationship so that personal or context factors that influence the effectiveness of strengths and deficiency interventions can be identified.

CONCLUSION

Our research results suggest that strengths interventions are more effective in stimulating graduate students' hope and PGI than interventions focusing on the development of individual deficiencies. Both hope and PGI contribute to students' academic and career success. These findings underline the importance of focusing on a person's best qualities for the purpose of stimulating individual development and growth.

CHAPTER 8

DISCUSSION

GENERAL DISCUSSION OF RESEARCH QUESTION

This dissertation combined literature on talent management on the one hand and on positive psychology and strengths-based approaches on the other to investigate whether the strengths-based approach can represent a beneficial, new approach to talent management that fosters employee well-being and development. This larger research question was split up into five sub-questions which will be discussed in the following.

1) What is Talent and what is Talent Management?

Neither a thorough review of the scientific literature, nor research into the definitions of talent used by HR managers resulted in an unequivocal answer to the question 'what is talent?'. In this dissertation, I placed particular emphasis on the questions whether talent is rare or common, and whether talent is innate or acquired. Reviewing the scientific literature on talent revealed that both the (un-)commonness and heritability of talent are matters of dispute among scientists (Chapter 2 & 3). Especially the latter point, the heritability of talent, provokes fierce controversy among scientists, who disagree as to whether talent is mainly determined by nature, by nurture, or by nature-nurture interactions (Chapter 2). The research evidence that scientists cite to underpin their respective positions is (to date) inconclusive, and has not yet provided compelling arguments in favor of the one 'right' definition of talent (Chapter 2). Moreover, research into the talent definitions of HR managers (Chapter 4) has shown that this group of respondents has widely varying ideas about talent. When asked to give an estimate of the percentage of talented employees within their organization, answers ranged from zero to 100 percent. Similarly, when the HR mangers were asked to rate the extent to which they believed that talent was innate, their answers ranged from 'talent is not at all innate' (0%) to 'talent is completely innate' (100%).

Building on these inconclusive results, one can reason that the search for the one 'right' definition of talent is of little avail, and that talent can better be interpreted as a context-dependent and relative phenomenon. Talent is context-dependent because a capability that is valued as a talent in one context might not be seen as a talent in another (Stewart, 2008). As an example, consider the ability to survive in a harsh, northern climate which is considered an essential skill among Alaskan Eskimos (Sternberg, 2006), but would not be recognized as a talent when applying for a job in a Western context. Moreover, talent is a relative construct because it acquires meaning through comparisons (e.g., Gallardo-Gallardo et al., 2013; Iles, 2013; Swailes et al., 2014). These comparisons can either be between- or within persons (Nijs et al., 2014). Between-person comparisons are based on the assumption that talented individuals exist in comparison to the untalented, or, in other words, that talented individuals can be identified as such because they perform significantly better than other individuals of the same age and experience (Aguinis & O'Boyle, 2014; Iles, 2013; Nijs et al., 2014; Swailes et al., 2014). These comparisons are commonly found in organizations with

exclusive approaches to talent management where some employees are classified as more valuable than others (Boudreau & Ramstad, 2005). Within-person comparisons, by contrast, imply that talent is identified by examining performance patterns of just one individual over time. Talent, according to this point of view, becomes manifest in activities in which a person consistently performs at his/her best, or in which a person displays intrapersonal excellence (Nijs et al., 2014). This perspective is in line with positive psychology and inclusive talent management (Peterson & Seligman, 2004; Seligman & Csikszentmihalyi, 2000).

Given that talent can have different meanings for different people, the same must hold true for talent management: The implicit meaning of talent management must vary depending on what or who one aims to manage. In an attempt to capture the different meanings of talent management, I have broadly defined the construct as "the systematic utilization of human resource management (HRM) activities to attract, identify, develop, and retain individuals who are considered to be 'talented'" (Chapter 3). This definition hinges on the expression 'who are considered to be talented' so that talent management can take on different meanings depending on the definition of talent one chooses. While thus acknowledging the existence of diverse talent definitions and talent-management approaches, I will zoom in on the benefits of inclusive talent management as one particular approach to talent management in the remainder of the discussion. I consider the inclusive understanding of talent worth advocating because it helps organizations to bring out the best in all employees.

2) How do Organizational Definitions of Talent Influence the Nature of the Organization's Talent Management Approach?

Experts on strategic human resource management (SHRM) have proposed that the underlying ideas and beliefs about employees held by organizational decision makers are vital determinants of the design of (systems of) HR practices (Becker & Gerhart, 1996; Paauwe, 2004), and, eventually, the effectiveness of these (systems of) practices (Boxall, 2012; Boxall & Macky, 2009; Paauwe, Guest, & Wright, 2013). Within this dissertation, I have argued that the same logic can be applied to talent-management practices or -systems (Chapter 3). That is, the underlying ideas about talent promoted by organizational key decision makers (talent philosophies) determine the specific design of talent management in practice. In particular, I have proposed that implemented talent-management practices are influenced by ideas about the (un-)commonness and heritability of talent.

In line with expectations, results of an empirical study among HR managers (Chapter 4) revealed that beliefs about the (un-)commonness of talent predict how talent management is shaped in practice. That is, HR managers who assume that talent is rare were found to be more likely to report the use of an exclusive talent definition within their organization than HR managers who assume that talent is common. Similarly, they also tend to report a higher degree of workforce differentiation. Contrary to expectations, no effect of the belief about nature versus nurture as determinants of talent on talent-management practices (in this

case: talent-identification procedures) was found. One explanation for this unexpected finding is that the HR function has only limited power within organizations because HR decisions often have to be approved by other key decision makers, such as the board of directors. Moreover, institutional theory points out that HR managers do not always have the necessary leeway to shape HR and talent-management practices in the way they intend because their room to maneuver is limited by institutional or normative mechanisms (DiMaggio & Powell, 1983; Paauwe & Boselie, 2003). Institutional theory has also highlighted that HR managers tend to imitate HR practices used by competitors when they face uncertainty or poorly understand processes (mimetic isomorphism; DiMaggio & Powell, 1983). Given that designing valid talent-identification procedures is highly complex (Silzer & Church, 2009a), mimetic isomorphism might be another reason why HR managers rely on performance ratings as a prime indicator of talent or potential (Dries & Pepermans, 2008) instead of designing a talent identification procedure in line with their talent definition.

3) Can Principles of Positive Psychology be applied to the Work Context and, if so, what Effects does this have on Employees and Organizations?

Based on a systematic review of the scientific literature (see Chapter 5), I concluded that principles of positive psychology can be successfully applied in the context of work. The literature review identified 15 experimental- or quasi-experimental studies testing the effects of positive psychology interventions on workers. Some of the tested interventions were transferred from a clinical or daily-life context to the work context without adaptation (cf. Loving-Kindness Meditation; Cohn & Fredrickson, 2010; Fredrickson et al., 2008), while other interventions were explicitly designed for the work context (cf. PsyCap-enhancing interventions, appreciative inquiry, and positive leadership; Cooperrider & Srivastva, 1987; Luthans et al., 2008). Overall, results of these studies have corroborated the beneficial effects of positive psychology interventions for employees, no matter whether these interventions were directly transferred from a clinical context, or adapted to fit the work context. One example of an intervention that is effective in the work context, but has originally been used by clinical psychologists (Carson et al., 2005), is loving-kindness meditation, a specific form of meditation in which participants are instructed to direct positive feelings towards themselves and people in their surrounding (Hofmann, Grossman, & Hinton, 2011). Even though one might assume that such an intervention is regarded with skepticism by working people with little interest in spirituality, research has shown that it produced favorable effects on employees of an IT services company (Cohn & Fredrickson, 2010; Fredrickson et al., 2008).

In more detail, results of the literature review (Chapter 5) show that both types of interventions (adapted to the work context or not) consistently result in well-being gains for employees. As a favorable side-effect, they can sometimes result in the mitigation of stress-related complaints, depression, and anxiety. Furthermore, the literature review has revealed that, to date, there are only very few studies that investigate the effects of positive

interventions on performance. Performance data were collected in only four out of 15 reviewed studies, and, out of these four, only two found a significant effect on performance. Nonetheless, the results of the two studies that corroborated the link between positive psychology interventions and performance (see Avey et al., 2011; Luthans et al., 2010) are promising because both of them relied on objectively measured performance, rated by either a supervisor or an independent assessor. The two other studies, in which no effect on performance was found (Abbott et al., 2009; Ruhe et al., 2011), made use of very small samples leading to low power of statistical testing. Taken together, an effect of positive psychology interventions on performance is thus likely, but has yet to be corroborated in additional studies.

4) What Effects do Strengths-based Approaches have on Employee Well-being, and through which Mechanisms do Strengths-based Approaches Work?

Systematically reviewing the literature on positive psychology interventions in organizations (cf. Chapter 5) revealed that there were no existing empirical studies on the effects of strengths-based interventions on employed people. In an attempt to contribute to closing this gap in research, this dissertation encompasses a quasi-experimental study with a sample of working people who either participated in a short strengths intervention (experimental group) or were placed in a waitlist control group (Chapter 6).

Results of this study showed that participating in a strengths intervention leads to increases in the general well-being of working people in terms of short-term increases in positive affect and longer-term increases in psychological capital (one month after the intervention). Contrary to expectations, no direct effect of the intervention on work-related well-being (work engagement and burnout) was found. Not finding this direct effect might have been related to the nature of the sample—a convenience sample of working adults from different organizations—and the rather big training groups which didn't give the trainers much opportunity to advise single participants on how they could apply their strengths at work. Moreover, the study participants showed rather high scores on work engagement and low scores on burnout from the outset of the study so that it was difficult to, on the one hand, improve their work-related well-being even further and, on the other, to detect these improvements due to ceiling- or floor effects (Wang et al., 2008).

In addition to uncovering direct effects of the strengths intervention on positive affect and psychological capital, the quasi-experimental study provided evidence for an indirect effect via positive affect. Results revealed that positive affect acts as a mediator that transmits the positive effects of the strengths intervention to satisfaction with life and work engagement, and the mitigating effects of the intervention to burnout. In line with the positive activity-model (Lyubomirsky & Layous, 2013), the quasi-experimental study (Chapter 6) thus provided evidence that engaging in positive activities such as using one's strengths leads to

immediate, short-term increases in positive emotional states, which contribute to individual well-being in the longer-term (at the one-month follow-up measurement in this study).

5) What Effects do Strengths-based Approaches have on the Development of Job Starters, and through which Mechanisms do Strengths-based Approaches Work?

While most existing studies on strengths interventions investigate effects on well-being-related outcome variables (Quinlan et al., 2012), theory on strengths indicates that these interventions should have additional effects on other outcome variables such as on individual growth and development (Peterson & Seligman, 2004). Individual growth is of particular interest in the context of talent management in which training and development are central (Tarique & Schuler, 2010). Therefore, this dissertation comprises two field experiments examining the effects of strengths interventions on students' personal growth initiative (Chapter 7).

Results revealed that a strengths intervention, that stimulates the development and use of strong points, leads to bigger increases in personal growth initiative than an intervention that stimulates the development of improvement points (Chapter 7). That is, young people who are made aware of their strengths and who subsequently focus on applying these strengths are more likely to take initiatives for self-development (Robitschek, 1998) than young people who are made aware of their shortcomings. I acknowledge that these results might not be transferable to the overall working population because they are based on a sample of students. However, all student participants were in their final year at the university and thus about to enter the labor market. Therefore, insights obtained from this study can likely be applied to job starters within organizations—who are often the focus of talent management (Dries & Pepermans, 2008).

Moreover, study results showed that the effect of the strengths intervention on students' personal growth initiative is mediated by hope, a state-like concept that captures individuals' global, positive expectations about the possibility to achieve their goals (Snyder et al., 1996; see also Chapter 7). Results thus indicate that strengths interventions foster the participants' belief in their ability to come up with different pathways towards their goals, and contribute to their determination to reach them (Snyder et al., 1996). These broad positive expectations, in turn, mentally prepare the participants for personal change, motivate them to actively look for opportunities to grow as a person, and make them initiate activities that will help them reach their goals with regard to their personal development (Robitschek et al., 2012).

STRENGTHS-BASED TALENT MANAGEMENT: FIT FOR NOW? FIT FOR THE FUTURE?

After having answered the specific research questions of my dissertation, I want to provide the reader with a broader reflection on the construct strengths-based talent management and its potential added value for organizations. Strengths-based talent management is a

term which I use interchangeably with inclusive talent management, and which captures the idea that the talents of all employees within a given organization are discovered, nurtured, and used. Overall, the results of this dissertation throw a favorable light on strengths-based talent management, but other scholars have asked some probing questions or voiced criticism with regard to this form talent management and its applicability in organizations. Scholars have, for instance, questioned whether inclusive talent management is just a chimera, that is, an illusory construct that can never truly exist. This question has arisen because "attracting, selecting, developing, and retaining world class talent represents a very significant investment for most organizations, and the harsh reality is that most organizations do not have the time or resources to do that for all organizational roles" (Huselid & Becker, 2011, p. 424). A second question concerns the distinction between inclusive talent management and human resource management (Collings & Mellahi, 2009): Which aspects are new and where does the emphasis of inclusive talent management lie? Third, next to calling into question whether inclusive talent management can ever be realistically applied in organizations (see first question), scholars have questioned whether such an approach to talent management, if applied, would provide benefits for organizations. Most notably, they queried whether this approach can ever be economic and/or strategic (Dries, 2013; Gallardo-Gallardo et al., 2013). Finally, in light of today's rapidly changing business environment, one might wonder whether inclusive talent management is an approach that is feasible for the future. In the following, these four research questions will be discussed in more detail.

Strengths-based Talent Management: Just a Chimera?

When browsing the corporate websites of diverse companies, one will often encounter phrases that allude to the idea that the organizations capitalize on the talents of all their employees. Critics might argue that organizations use these positive phrases merely as a powerful rhetoric, but that they bear little resemblance to reality. I think that the critique is applicable to many albeit not all organizations. Inclusive talent management is almost impossible to realize if an organization conceptualizes talent as an individual characteristic that allows one employee to outperform another (cf. between-person standard of comparison; Nijs et al., 2014; Swailes et al., 2014). This conceptualization of talent is, for instance, found in literature on star performers: The sole criterion for identifying stars is their superior performance relative to others (Aguinis & O'Boyle, 2014). Since there are only few star performers in a given domain (O'Boyle Jr & Aguinis, 2012), it would be unreasonable to assume that an organization can succeed in hiring stars for all organizational positions. Consequently, an inclusive approach to talent management is unrealistic if one conceptualizes talent as superior performance relative to others (Swailes et al., 2014). Implementing inclusive talent management is, however, much more realistic if one conceptualizes talent as an individual characteristic that allows one employee to perform at his or her personal best, in line with positive psychology (cf. within-person standard of

comparison; Nijs et al., 2014; Wood et al., 2011). Inclusive talent management would then imply that organizations help all employees to find these characteristics of theirs (their talents), and facilitate the development and use of talents at work.

A more extensive definition of inclusive talent management has been developed by Swailes et al. (2014):

> "Fully inclusive talent management is the recognition and acceptance that all employees have talent together with the ongoing evaluation and deployment of employees in positions that give the best fit and opportunity (via participation) for employees to use those talents. Where an employee's talents are mutually deemed to fall below reasonable thresholds that the organization has democratically, not arbitrarily, set and adopted, the organization should assist the employee to deploy their talents elsewhere." (p. 5)

Based on this definition, I argue that inclusive talent management is practicable even though it brings about certain challenges. The first element of the definition, recognizing and accepting that all employees have certain talents, is in line with literature on positive psychology suggesting that all employees can reach personal excellence when employing their strong points (Nijs et al., 2014; Wood et al., 2011). Furthermore, inclusive talent management is about ensuring that employees get the opportunity to use their talents by placing employees in positions that fit their strengths profile. Critiques might argue that certain employee talents (like the talent to arrange a nice flower bouquet) cannot be productively applied in (most) organizations. I would counter this argument by claiming that talents can become manifest in different ways, but that the manifestation is not equal to the talent itself. In other words, arranging a nice flower bouquet is not the actual talent, but just one manifestation of a talent which one can better refer to as 'creativity' or a 'sense for aesthetics'. Other manifestations of creativity, like the ability to make visually appealing presentations, are useful for a whole range of jobs. It is thus important to find the true underlying talent before one judges whether a talent is applicable in a certain work environment or not. Finding underlying talents is complex, but can be achieved through using questionnaires such as the Values in Action Inventory of Strengths (VIA-IS; Peterson & Seligman, 2004) or through gathering feedback from different people in one's surrounding (cf. the reflected best-self exercise; Roberts et al., 2005; see also Chapter 6). Note, however, that I do not dispute that there are situations in which the talents of an employee cannot be matched to any function within a given organization. In this case, inclusive talent management implies that organizations assist such an employee to find a new position in another organizations in which his or her talents can be harnessed (see last part of the definition by Swailes et al., 2014).

Strengths-based Talent Management: Which Aspects does it add to HRM?

Scholars have argued that talent management would be essentially the same as human resource management if it included all employees (Collings & Mellahi, 2009). In fact, it has been reasoned that making a differentiation between talented and other employees is the only feature that distinguishes talent management from HRM (Chuai et al., 2008; Gelens et al., 2013). I do not want to embark on a discussion about the use of these two terms at this point because that would require an extensive review of the literature on both HRM and talent management. Instead, I am going to reflect on the aspects of HRM that are emphasized, or the shifts in HR practices that can be expected when implementing inclusive talent management.

In organizations with an inclusive talent-management approach, a strong emphasis is placed on the systematic assessment of the talents of all employees irrespective of their current function, as well as on the coordinated movement of people to organizational positions that allow them to deploy their talents (Swailes et al., 2014). HRM can also encompass talent identification procedures and measures to increase person-job fit, but these procedures or measures would probably be used for only some instead of all employees. Talent identification, for instance, commonly takes place with the aim of filling very particular organizational positions (e.g., leadership- or technical expert positions) (McDonnell, Hickey, & Gunnigle, 2011) implying that large portions of the workforce who lack the necessary educational background are excluded from the outset. Second, while both inclusive talent management and HRM encompass employee training and development, development in the context of HRM often departs from a problem- or needs-analysis and is commonly used to work on 'deficient' skills that do not belong to the talents of an employee (Swanson & Holton III, 2001). Competence management is a prominent example of this approach to development, starting with the assessment of competence needs within an organizations, followed by the specification of gaps between the needed and available competences, and completed with sourcing- or development activities to close the competence gaps (Lindgren, Henfridsson, & Schultze, 2004). In clear contrast to this approach, development in the context of inclusive talent management is based on the assessment of the things that employees do well, and aims at cultivating these existing strengths even further. Inclusive talent management, however, does not imply that deficiencies are completely ignored (Linley & Harrington, 2006). Even if employees are positioned in functions that provide ample opportunities to employ their strengths, these functions might still comprise some tasks that do not come easy to the employees. In this case, inclusive talent management either offers development activities directed at mending these deficiencies or aims at managing 'around' these deficiencies by means of, for instance, complimentary partnering or task redesign (Buckingham, 2005; Linley & Harrington, 2006).

To conclude, I want to add an interesting thought expressed by Stephen Swailes and co-authors (2014): Instead of arguing that inclusive talent management is not in fact talent management but HRM, one might also argue that exclusive talent management is just partial talent management. That is, while inclusive talent management aims at capitalizing on the talents of all employees and at providing everyone with the opportunity to function at their personal best (Buckingham & Vosburgh, 2001; Caplan, 2011), exclusive talent management fosters the talents of an elite circle of employees, but disregards the talents of the vast majority of the workforce.

Strengths-based Talent Management: What's in it for an Organization?

A major point of critique with regard to inclusive talent management is that treating all employees the same and investing equally in all employees is neither cost-efficient nor effective (Dries, 2013; Gallardo-Gallardo et al., 2013). This criticism is based on literature on strategic HRM and workforce differentiation, and the related argument that "different jobs and people need to be treated differently" (Huselid et al., 2005) to maximize the return on HR investments (Boudreau & Ramstad, 2005; Lepak & Snell, 1999). Consequently, advocates of exclusive talent management argue that the lion's share of talent management resources should be allocated to the best employees (the 'talents') in positions that form part of the organization's core business (Boudreau & Ramstad, 2005; Huselid et al., 2005). In line with expectations, research evidence so far has underpinned that the few employees who form part of the organization's talent pool benefit from exclusive talent management and the unequal allocation of resources: They score higher on commitment, perceived organizational support, and job satisfaction than employees who don't belong to the organizational talent pool (Gelens et al., 2013; Gelens et al., 2014; Marescaux et al., 2013). HR managers will generally interpret these findings in a positive light, because committed and satisfied 'talents' are likely to perform well and to stay with their employer (cf. results of meta-analyses on consequences of commitment and job satisfaction; Iaffaldano & Muchinsky, 1985; Mathieu & Zajac, 1990).

In stark contrast to advocates of exclusive talent management, Stewart (2008) claimed that "on balance inclusive approaches seem to bring more positive and fewer negative results than exclusive approaches" (p. 8). This claim is based on the criticism that exclusive talent management can have severe negative effects on the majority of employees who are not considered talented (Malik & Singh, 2014). These employees are likely to react with reduced commitment, satisfaction, and motivation to an unequal allocation of resources (Björkman, Ehrnrooth, Mäkelä, Smale, & Sumelius, 2013; Gelens et al., 2013), which could mitigate or even outweigh the positive effects on employees within the talent pool (Marescaux et al., 2013). Inclusive talent management not only avoids these negative effects, but also facilitates a range of positive employee reactions. First and foremost, implementing inclusive talent management makes employees feel valued and gives them the opportunity to do what they

do best, leading to increases in employee well-being (Harzer & Ruch, 2012; Sekerka et al., 2006; see also Chapters 5 & 6 of this dissertation). Furthermore, employees are likely to interpret inclusive talent management as an approach that the upper management team has chosen because they care for their employees (Swailes et al., 2014). Such positive attributions about the motives of upper management are less likely among employees of organizations with an exclusive talent-management approach. Exclusive strategies are often implemented as a measure to increase performance (Boudreau & Ramstad, 2005; Lewis & Heckman, 2006) conveying the idea that making profits is the primary concern for the management team.

Both employee well-being and positive employee attributions about the goals of the upper management team lead to further favorable outcomes that benefit organizations. In a recent review, Peccei et al. (2013) propose several theories that explain the link between employee well-being and organizational performance. Based on the happy-productive worker thesis (Cropanzano & Wright, 2001; Wright & Staw, 1999) and social exchange theory (Blau, 1964), the authors reason that employees who are happy and satisfied with their job respond with increased commitment to the organization, and with a willingness to 'repay' the organization for the positive treatment by putting extra effort into work activities (Peccei et al., 2013). Furthermore, the authors draw on the broaden-and-build theory of positive emotions to suggest that being in a positive mood induces employees to search for creative solutions to problems, to try out new, innovative behaviors, to connect and interact with their colleagues, and to be supportive and helpful (Fredrickson, 2003; Peccei et al., 2013). Consequently, organizations benefit from employee well-being not only in terms of increased in-role performance (e.g., through expending effort), but also through increases in extra-role performance (e.g., innovativeness and OCB; van Woerkom & Meyers, 2014). Next to enhancing performance, employee well-being can also help to diminish sickness absenteeism because employees who are doing well are better equipped to deal with work pressure and stress (Kuoppala, Lamminpää, Väänänen-Tomppo, & Hinkka, 2011). Similarly, literature on employee attributions posits that employees who perceive that their employers implement HR- or talent-management practices with the purpose of enhancing employee well-being are likely to adopt positive attitudes towards their organizations (Nishii et al., 2008). These positive attitudes, in turn, are meaningful predictors of individual and team-level performance (Nishii et al., 2008; Riketta, 2008).

Building on these arguments, I therefore assume that organizations can achieve real gains by implementing inclusive talent management, and that these gains mainly evolve from focusing on and increasing employee well-being.

Strengths-based Talent Management: Fit for the Future?

Nowadays, organizations face an exceedingly uncertain future. Major transitions such as the expanding globalization and steeply rising reliance on information and communication technologies (ICTs) contribute to fast changing economic conditions (Boutin et al., 2009;

Näswall, Hellgren, & Sverke, 2008). Organizations have to find strategies to stay ahead of their competitors in highly dynamic and often unpredictable environments. Exclusive talent management strategies that invest narrowly in a few particular talents or competencies might fail in dynamic contexts, because the (sets of) talents that are needed to successfully run a business are as unpredictable as the context, and might thus change very quickly (Yost & Chang, 2009). Organizations with inclusive talent-management strategies, by contrast, broadly invest in the diverse talents of their workforce so that they are better equipped to adapt to dynamic business environments (Yost & Chang, 2009). Inclusive talent management can also be an efficient strategy in the light of other factors that will shape the future world of work, such as a stronger reliance on short-term contracts, a shift in the responsibility for development from the organization to the individual, local shortages of talent, and demographic changes—most notably, the ageing of the workforce in developed countries (Al Ariss, Cascio, & Paauwe, 2014; Garrow & Hirsh, 2008; Hall, 1996; Stahl et al., 2012).

The two former points, a strong reliance on short-term contracts and a shift in the responsibility for development to the individual employee, will challenge the utility of the prevailing exclusive talent-management approach. In fact, investing heavily in the development of a few, selected employees appears to be outdated given that employee loyalty to one company abates while career advancements through changing employers becomes more common—in particular, among young employees (Garrow & Hirsh, 2008). Organizations will become more and more reluctant to invest in employee development if the risk of losing critical employees to competitors increases. Yet, organizations need employees who are flexible, willing to learn, and who are able to adapt to changing circumstances (Spreitzer et al., 1997). In the light of this, inclusive talent management is a viable alternative to exclusive talent management because accentuating individual strengths can motivate young employees to self-manage their personal development (see Chapter 7). It thus avoids extensive investments in the development of (a few) employees, but stimulates employees to invest in their personal growth themselves.

In addition, practitioners and academics have predicted that skill shortages will continue to be one of the major challenges that organizations face in the future (e.g., Farndale et al., 2010; ManpowerGroup, 2012). When talent is in short supply, it is essential that the available talent is put to optimal use. Inclusive talent management strives to do so by providing all employees with the opportunity to unfold their potential and by deploying workers in positions where their talents can be harnessed (Downs & Swailes, 2013). Exclusive talent management, by contrast, ignores and eventually 'wastes' the talents of many employees (Downs & Swailes, 2013) which appears inconsiderate in the light of the prevailing talent scarcity.

A final argument in favor of inclusive talent management as a strategy with bright future prospects relates to the management of older workers. The aging process brings about

changes in individual motives and abilities that can contribute to a growing misalignment between older people and their jobs (Kooij, De Lange, Jansen, Kanfer, & Dikkers, 2011). Due to person-job misfit, older individuals often experience boredom at work and become less engaged in their work tasks (Kooij, Tims, & Kanfer, 2015). Literature on job crafting suggests that older employees can avoid these negative experiences if they proactively adjust their work in line with the individual changes they undergo with increasing age (Kanfer & Ackerman, 2004; Kooij et al., 2015). Next to these bottom-up changes initiated by the employees themselves, inclusive talent management can represent a top-down strategy that promotes the alignment between personal capabilities and job tasks and creates leeway for older employees to switch to more suitable positions in which they can capitalize on their strengths (e.g., their broad job knowledge and experience; Kanfer & Ackerman, 2004).

Taken together, I therefore argue that inclusive talent management is a feasible alternative to exclusive talent management in light of the world of work which organizations will face in the near future.

IMPLICATIONS

Implications for Theory

When I started to write this dissertation, the scientific field of talent management was harshly criticized for its lack of clear definitions, theoretical frameworks, and theoretically underpinned research propositions (Collings & Mellahi, 2009; Lewis & Heckman, 2006). Due to a growing number of theoretical publications on talent management (see for instance special issues on talent management in *Human Resource Management Review*, 2013, and *Journal of World Business*, 2014), the field has matured throughout the last few years (Thunnissen et al., 2013a). This dissertation has contributed to the maturation of the field by making sense of and giving structure to the previously unstructured and at times chaotic mass of talent-management definitions. In a first step towards this end, I conducted a multi-disciplinary review of the scientific literature on talent to clarify the meaning of this basic construct (Chapter 2). Subsequently, the insights gained through this literature review were used to develop a framework of four distinct talent definitions (talent philosophies) that are likely to be found among HR managers (Chapter 3). Drawing on this framework of talent definitions, I explained and made predictions about different talent-management approaches implemented in practice. Rather than advocating that scholars need to converge towards one common definition of talent management, I use the framework of talent definitions to back up Boudreau's (2013) request to appreciate the diversity in talent-management definitions and to regard it as an inspiration for research. In line with this thought, I have presented testable propositions about the effects of different talent-management approaches on employee- and organizational outcomes. These propositions can inform, and give direction to future research on different organizational approaches to

talent management, in particular future research on comparing the effects of inclusive and exclusive talent-management approaches. A major theoretical argument that I want to put forward in this dissertation is that inclusive talent management is one form of talent management that has favorable effects on the well-being, development, and performance of working people.

This latter argument is informed by theory on the application of positive psychology in organizational contexts, a second theoretical field to which this dissertation contributes. After systematically reviewing empirical studies on positive psychology interventions for employees, I concluded that these interventions can successfully be applied in work contexts (Chapter 5), and that they benefit employees, in particular, through enhancing their well-being. Adding to the existing body of literature, this dissertation comprises three field experiments that are among the first empirical studies to investigate the effects of strengths interventions—as one particular form of positive psychology interventions—on employees and on young adults who are about to enter the labor market. In line with theory on strengths and prior research on other positive psychology interventions, results showed that these interventions contribute to building the overall well-being of working people. In addition, I also found hints that strengths interventions are beneficial for increasing personal growth initiative as another outcome variable that has not yet been extensively investigated in the context of positive psychology. By linking literature on positive psychology to literature on personal growth initiative (counseling psychology), this dissertation provides other scholars with a theoretical explanation of why strengths interventions should not only foster well-being but also personal development. Finally, this dissertation contributes to theory on strengths intervention by drawing attention to two potential mediators that transmit the effects of these interventions: positive affect and psychological capital. It has been found that positive affect serves as a mediator in the relationship between strengths interventions and respectively satisfaction with life, work engagement, and burnout, and that psychological capital—in particular, the sub-component hope— acts as a mediator in the relationship between strengths interventions and personal growth initiative.

Implications for Practice

This dissertation highlights that the definitions of talent and talent management that are used by organizational decision makers across various industries and countries differ considerably. That is, there is no such thing as the one 'best' definition of talent or talent management. In line with this, there are also no 'best practices' with regard to talent management that are universally supported by results of empirical research. Organizational decision makers are therefore advised to not copy the talent-management system that competitors have, but to benefit from the diversity of talent definitions and talent-management approaches. In other words, they can best adhere to a talent definition that fits

their overall business strategy and their organizational culture, and implement a talent-management system in line with this talent definition.

Within this dissertation, I have established that inclusive talent management is an excellent option for organizations in which employee well-being and engagement rank among the top HR priorities. Furthermore, inclusive talent management is an appropriate means to comply with diversity and inclusion policies. In the context of inclusive talent management, all employees are valued for what they are good at, independent of gender, religion, ethnicity, sexuality, or disability. If truly inclusive talent management is not a suitable option (due to, for instance, a very competitive organizational culture), HR managers can also consider the implementation of a hybrid approach to talent management (Stahl et al., 2012). Hybrid approaches are inclusive in that they strive to identify the talents of all employees and deploy these talents in suitable positions, and exclusive in that they offer extra opportunities to employees who currently occupy, or will potentially move to key organizational positions.

Finally, this dissertation has highlighted that HR managers can utilize strengths interventions as a time-efficient tool to enhance the overall well-being—and as a likely consequence, performance—of the workforce. Moreover, strengths intervention can be implemented as an effective measure to prevent stress-related health complains and sickness absenteeism. However, HR managers should be aware that strengths interventions are not the only way to reap the benefits of focusing on employee strengths in the workplace. Positive effects can be realized by implementing slight changes in organizational procedures such as changing the focus of existing performance appraisals from evaluating employee weaknesses to evaluating individual strengths (Bouskila-Yam & Kluger, 2011). Building on literature about devolving HR responsibilities to line managers (Perry & Kulik, 2008; Sikora & Ferris, 2014), I also propose that training line managers in principles of positive psychology can bring about considerable changes. If line managers set the example by drawing attention to the unique talents of their subordinates, they could play an important role in building an appreciative work context in which employees recognize and value each other's strengths (Moore, Cangemi, & Ingram, 2013). Furthermore, one can argue that changes do not always have to be initiated in a top-down manner. Literature on job crafting highlights that employees can also be seen as active agents who take the initiative to make small adjustments to their work tasks or their work environment so that they better suit their strengths or preferences (Tims & Bakker, 2010; Wrzesniewski & Dutton, 2001). Organizational decision makers can use this knowledge by granting more leeway to employees, and by thus creating opportunities for employees to shape their work environment on their own authority.

Implications for Methodology

Within this dissertation, the reader comes across a cross-sectional survey study (Chapter 4), and three longitudinal field experiments (Chapter 5 and 6), among others. Similar to my study on HR managers' talent definitions (Chapter 4), the majority of existing empirical

studies on HRM have made use of survey research, with a current trend away from basic, cross-sectional and single-source designs towards longitudinal designs with at least two measurement waves, and multi-rater and/or multi-level research designs. While the diverse research designs are certainly valuable in their own right—multi-level or multi-rater studies, for instance, are highly useful for investigating relationships between variables at different organizational levels (individual, team, organizational)—I want to make a plea for more field experiments in HRM research. This plea builds forth on previous criticism stressing that much of the research on the effect of HR practices on (performance) outcomes makes claims about causality while the research design is not suitable to assess causality (Paauwe, 2009; Wright, Gardner, Moynihan, & Allen, 2005).

One of the biggest advantages that field experiments offer above other, more common cross-sectional or even longitudinal research designs is that researchers can—at least, to some extent—draw conclusions about cause- and effect relationships based upon their results. However, building on the experience I gained while conducting the research projects for my dissertation, there are important boundary conditions that have to be fulfilled in order to be able to draw these conclusions. First, field experiments do not allow for the control of all (environmental) factors that might bias the results so that careful measures must be taken to minimize the influence of these factors. Random allocation of participants to the different experimental groups is necessary to equalize the influence of factors that one cannot account for otherwise. It has been suggested that pair-wise matching and stratification might be suitable alternatives to standard randomization in studies with small sample sizes (Bruhn & McKenzie, 2009). If participants work closely together within teams or departments, one might also opt for a random allocation of teams/departments to the experimental conditions to avoid that an exchange of experiences between members from different experimental groups disturbs the results. I would furthermore advise to draw a sample from one single organization, so that organization-specific changes that might occur concern all participants equally, independent of the experimental group they belong to. To gain an understanding of these organization-specific factors, it is advisable to keep close contact with an HR manager or another key manager who can inform the researcher about relevant developments within the organization. As an alternative, one might broaden the research design by adding a qualitative aspect, that is, by conducting semi-structured interviews with at least some of the research participants. In my research, I furthermore found hints for ceiling- and floor-effects (Wang et al., 2008) that occurred because the majority of respondents were doing very well at baseline measurement already. This implies that scales for quasi-experimental research need to be carefully selected or even adapted to ensure that they can capture changes in outcome variables over time. One final point that researchers need to take into consideration is the amount and nature of control groups. While I conducted one study in which I compared the experimental group to a waitlist control-group, and two studies in which I compared the experimental group (receiving a

strengths intervention) to an 'active' control group which also received an intervention (deficiency intervention), a combination of these two approaches would be ideal. If possible, the best solution would be to compare an experimental group, an active control group (receiving either a placebo-intervention or an intervention that is commonly used in a certain context such as the deficiency intervention in my studies, see Chapter 7), and a passive, waitlist-control group. This would allow researchers to make claims about gains in a certain variable while at the same time excluding the possibility of finding effects merely due to paying attention to participants in the experimental group (cf. the Hawthorne effect; Adair, 1984).

LIMITATIONS AND FUTURE RESEARCH

Next to the limitations of the separate studies that have been discussed in the respective chapters, this dissertation as a whole is subject to five major limitations.

First, while this dissertation aimed to integrate literature on positive psychology and talent management, it proved to be difficult to conduct research that truly reflected this integration of the two literature streams. Most notably, it would have been desirable to conduct research in one or two organizations in which an inclusive approach to talent management had been implemented to answer the research question of this dissertation. Because examples of truly inclusive talent-management approaches within organizations are rare, however, it proved to be difficult to conduct such a study. Moreover, this dissertation represents one of the first attempts to incorporate positive psychology into talent management literature, and is thus highly explorative in nature. Nonetheless, it can serve as a foundation for future research on the effects of inclusive talent management on employees and organizations. One idea for a valuable future research project would be to conduct an in-depth, comparative case analysis between one organization with an inclusive and another with an exclusive talent-management approach. Another idea would be to conduct a longitudinal field experiment in which researchers collect data before and after an organizational change initiative that aims to transform a previously exclusive talent-management system to an inclusive one.

A second limitation concerns the ability to generalize findings of this dissertation and to draw conclusions for different populations in different contexts. I do think that the cross-sectional study on HR managers' definitions of talent gives a fairly representative overview of the true situation within a larger population of HR managers (Chapter 4) because the sampled HR managers come from a variety of countries, work for organization in various industries, of various sizes, and with different ownership forms. By contrast, it is much more difficult to generalize findings of the three quasi-experimental studies that have been conducted (Chapters 6 and 7) because the samples were restricted in terms of age (samples of students in two studies), gender (mainly female), and, most notably, educational background (highly

educated). From these studies, one can infer that strengths-based approaches benefit highly educated participants, but one cannot say much about effects on people who only received very basic education. I would presume that discovering and gaining recognition for one's strong points is equally valuable for highly- and poorly educated employees. Developing and using strengths, by contrast, might be difficult to realize for poorly educated employees, who often have less autonomy and less diverse tasks than highly educated employees. Future research on the effects of strengths interventions can improve the generalizability of findings by using more balanced samples with almost equal numbers of male and female participants, of diverse ages, and from diverse educational backgrounds. Demographic variables could then be studied as a moderating variable that potentially alters the strength or direction of the intervention's effects.

A third limitation relates to the outcomes of strengths interventions that have been studied in this dissertation. The incorporation of an outcome variable other than well-being (personal growth initiative) and the exploration of mediating mechanisms can be seen as valuable contributions to the existing literature, but the use of self-report measures to assess outcomes in all empirical studies can be criticized (Chapter 4, 6, 7). While self-report measures are feasible for studying subjectively perceived variables such as well-being, it would have been desirable to expand the research by adding objective measures of individual development or career advancement for the student samples (Chapter 7), and of performance for the employee sample (Chapter 6). Unfortunately, collecting these objective measures proved to be impossible within the context of the particular studies I conducted. In the studies presented in Chapter 7, the students had to participate in both the strengths- and the deficiency intervention before graduation—to avoid giving one group of students an advantage over the other—so that the effects of the respective interventions on the students' career development could not be investigated. Moreover, the employees who participated in the strengths intervention described in Chapter 6 worked in different organizations, which made it difficult to find a performance indicator that was both objective and comparable across organizations. It is, however, highly advisable to investigate the strengths intervention-performance link in future research, and I suggest that this is done by conducting field experiments within one organization in which employees are evaluated based on the same performance indicators.

A fourth limitation of this dissertation and the research it comprises is the fact that the role of line management for shaping inclusive talent-management approaches is mainly neglected. Literature on HR practices suggests that line managers are increasingly important organizational actors who adjust HR practices according to their own ideas and assumptions about people, which exerts a strong influence on how these practices are perceived by employees (Whittaker & Marchington, 2003). Thus, next to sampling HR managers, one might have also sampled line managers and might have questioned them about their beliefs about talent (Chapter 4). Similarly, the research on strengths interventions for employees (Chapter

6) might have been expanded by asking the employees' supervisors to rate the extent to which they encourage their employees to develop and use their strengths. Such a variable is a potentially meaningful moderator that can greatly influence the effectiveness of strengths interventions. Next to including this or a comparable moderator such as leader-member exchange in future research on strengths intervention, I would also call for future multi-level studies that comprise supervisor reports of the extent to which they include all employees in talent management, as well as subordinate ratings of the perceived inclusiveness of the talent-management approach, employee well-being, organizational commitment, and other outcome variables.

Finally, this dissertation looked at strengths at the individual level and the effects of strengths interventions on individuals only ('What am I good at and how can I develop and use my strengths?'). This is a valuable first step when aiming to investigate the effects of strengths interventions on working people, but one might suppose that the true benefits of strengths interventions can only be reaped when whole work teams participate in strengths interventions. Team-based strengths intervention can be used to stimulate the mutual appreciation of each other's strengths ('What am I good at and what are my colleagues good at?') and mutual support in developing and using strengths ('How can we help each other to develop and use our strengths? Could we, for instance, swap tasks?'). Stimulating these team processes might help to create a work climate in which employee strengths are appreciated and deployed, thereby mitigating the risk that single participants forget about the training contents shortly after participating. I therefore strongly encourage future research on strengths interventions for complete work teams.

CONCLUSION

Talent is a valuable entity and should, as such, not be wasted. In line with literature on positive psychology, I assume that each and every individual possesses certain talents. Given this assumption, I would argue that exclusive approaches to talent management that are commonly implemented in today's organizations neglect the talents of a majority of employees, and can therefore only be considered partial approaches to talent management. Strengths-based or inclusive talent management can be seen as an attractive, socially responsible alternative to exclusive talent management (Swailes et al., 2014) because it avoids wasting talent and gives all employees the opportunity to fulfill their potential. The research results presented in this dissertation underline the attractiveness of inclusive talent management by showing that it is conducive to employee development and well-being.

Drawing one final time on classic literature, I want to conclude this dissertation with citing my fellow countryman Johan Wolfgang von Goethe who used the following, beautiful line to express the essence of the strengths-based movement: 'Talent aber findet sein höchstes Glück in der Ausführung' ['talent finds its happiness in execution']. Thus, use your talents!

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SUMMARY

SUMMARY

In many organizations, 'talent management' is a frequently discussed topic because organizational decision makers regard employee 'talent' as a valuable resource that needs to be used efficiently. It is considered indispensable to have viable strategies aimed at attracting, developing, motivating, and engaging talented employees. In the literature as well as in practice there are, however, considerable ambiguities about the precise definitions of talent and talent management. In turn, these ambiguities render the efficient management of talented employees complicated. It is often unclear which employees within an organization are considered talented and why. Similarly, different organization can pursue approaches to talent management that do not share any obvious resemblances.

A major difference in talent-management approaches is the amount or percentage of employees that get access to talent-management practices. Most commonly, organizational decision makers implement exclusive approaches to talent management reflecting the idea that only very few employees (10-15 % of the workforce) possess valuable talents. In line with this idea, they make a strict distinction between a small group of talented employees and a much bigger group of 'average' employees without distinguished abilities. Only the former group, the 'talents', will be provided with access to special training programs, long-term career planning, rewards, and the possibility to quickly advance to more senior positions within the organization. While it is reasonable to assume that this exclusive approach has favorable effects on the talented employees, it is likely to be frustrating and demotivating for the rest of the employees.

This dissertation aims at making the case for another, lesser-known approach to talent management that promotes equal conditions for all employees: *inclusive or strengths-based talent management*. This approach to talent management is rooted in positive psychology and draws on the underlying assumptions that all people have distinct, valuable qualities (i.e. strengths), and that they will feel good, thrive, and excel if they get the chance to develop and use these strengths. In organizations with an inclusive approach to talent management, managers therefore aim to identify the unique strong points of all employees (no matter what these strong points are), and to find suitable positions for them that allow them to use their strengths. It is assumed that strengths-based talent management contributes to the well-being and development of all employees because it makes them feel appreciated and supported.

In short, this dissertation represents the first attempt to integrate literature on positive psychology and talent management by investigating whether a strengths-based approach to talent management is a beneficial, new approach to talent management with positive effects on employee well-being and development. To this end, I have first focused on shedding light on the constructs and definitions of talent and talent management (Chapter 2 & 3). Second, I

examined the influence of different definitions of talent on organizational approaches to talent management (Chapter 2, 3, 4). Subsequently, I provide an overview of applications of positive psychology in the work context (Chapter 5), and investigate the effects of interventions that focus on identifying, developing, and using strengths of employees and students (Chapter 6 & 7).

OVERVIEW OF CHAPTERS AND MAIN FINDINGS

The question of 'What is talent?' is central throughout *Chapter 2*. In particular, the chapter aims at answering the questions whether talent is determined by our genes (innate), whether talent can be developed even without a genetic predisposition (acquired), or whether talent is the result of interactions between our genes and the environment we grow up in. Reviewing literature from different disciplines such as education, positive psychology, and human resource management revealed that researchers disagree considerably about whether talent is either innate or acquired. There are proponents of genes as the sole determinant of talent, proponents of the indispensable influence of the learning environment, and proponents of the interaction perspective, and all of these scholars refer to scientific evidence to support their respective positions. Given that scholars have very divergent ideas about the extent to which talent can or cannot be developed, it can be assumed that the same holds true for organizational decision makers. The ideas about talent held by organizational decision makers, in turn, are likely to influence the design and shape of an organization's talent-management system. For example, an HR manager who strongly believes that talent can be acquired will put much more emphasis on talent development than an HR manager who believes that talent is a stable entity.

Chapter 3 builds forth on these ideas and on the basic assumption that organizational decision makers and, in particular, HR managers have individual ideas, beliefs, and assumptions about talent. In this chapter, the term 'talent philosophies' is introduced to refer to these underlying ideas about talent. I propose that talent philosophies vary along two dimensions. In line with Chapter 2, the first dimension captures ideas about the innateness of talent, ranging from the belief that talent is predetermined by genes (stable) to the belief that it can be acquired (developable). The second dimension captures ideas about the exclusiveness of talent and ranges from the belief that talent is something that only few people possess (exclusive) to the belief that everyone possesses certain talents (inclusive). Combining these two dimensions leads to four distinct talent philosophies: the exclusive/stable; exclusive/developable; inclusive/stable; and inclusive/developable talent philosophy. I discuss the four philosophies in detail in Chapter 3 and propose that each talent philosophy has unique implications for the design and focus of talent management. An exclusive/ stable talent philosophy, for instance, calls for 'fighting the war for talent' because HR managers assume that there are only very few, naturally gifted individuals on the labor market. As a consequence, organizations compete with one another for these

individuals and are trying to 'win them over' by making tempting job offers including high salaries, lucrative bonus packages, and the prospect of quick career advancement. In a parallel way, the other three talent philosophies can be linked to specific talent-management practices.

Chapter 4 builds upon Chapter 3 and puts the four talent philosophies to test. In particular, this chapter investigates whether the four talent philosophies that were introduced in Chapter 3 can be found among a cross-cultural sample of 321 HR managers from different organizations in 49 countries. In addition, it examines whether talent philosophies are related to an individual's implicit person theory (fixed versus growth mindset), an organization's definition of talent, workforce differentiation, and talent-identification criteria. Results corroborate that HR mangers' ideas and beliefs about talent can be categorized into four clusters that represent the four hypothesized talent philosophies (exclusive/stable; exclusive/developable; inclusive/stable; and inclusive/developable). In line with expectations, it was also found that HR managers with a growth mindset are more likely to hold one of the two developable talent philosophies than HR managers with a fixed mindset. Furthermore, results were supportive of a positive relation between the two exclusive talent philosophies and respectively an exclusive organizational talent definition and high degrees of workforce differentiation. However, results did not provide support for the assumed link between talent philosophies and talent selection criteria. Taken together, this chapter provides initial evidence for the relevance of different talent philosophies to talent-management research.

The subsequent chapter, *Chapter 5*, focusses on the application of positive psychology within organizations. Due to links between positive psychology and its inherent idea that every individual has positive qualities on the one hand, and inclusive talent management on the other, the knowledge base on positive psychology can inform the discussion about inclusive talent management. As a consequence, the aim of the fifth chapter is to gain a comprehensive overview of the existing research on positive psychology interventions in organizations. Positive psychology interventions encompass all intentional activities or methods that are based on (a) cultivating positive subjective experiences, (b) building positive individual traits, or (c) building civic virtue and positive institutions. A systematic literature search identified 15 studies that examined the effects of such an intervention in an organizational context. The included intervention studies differed considerably in their focus (i.e. from writing about things one is grateful for to participating in loving-kindness mediation), but none of the reviewed studies investigated an intervention with a focus on identifying or using employee strengths. Close examination of the results of the identified studies pointed out that positive psychology interventions are effective tools to enhance employee well-being. In addition, they seem to have at least some potential to enhance employee performance. As a favorable side-effect, positive psychology interventions tend to diminish stress and burnout, and, in some cases, depression and anxiety. Taken together,

the results provide support for the benefits of applying positive psychology in the work context, and point out that more research on employing strengths at work is needed.

Consequently, *Chapter 6* focuses on closing this research gap. Strengths interventions are training interventions that typically start with activities to identify individual strengths, and proceed with activities that stimulate the participants to develop and use their strengths. The aim of Chapter 6 was to explore whether such an intervention could help to increase the general well-being (operationalized as positive affect, psychological capital, and satisfaction with life) and work-related well-being of employees (operationalized as increases in work engagement and decreases in burnout). Furthermore, the chapter investigates positive affect as a potential mediator in the relationship between strengths interventions and the other four indicators of well-being. The effects of the strengths intervention were tested by means of a longitudinal field experiment with three measurement waves (pre-intervention, post-intervention, and one month follow-up questionnaire). The research sample consisted of 116 employees who were either assigned to the experimental group (participating in a strengths intervention) or a waitlist control group. Results of this study indicate that participating in a strengths intervention creates short-term increases in employee positive affect and short- and long-term increases in psychological capital. We did not find evidence for a positive, direct effect of the strengths intervention on satisfaction with life, work engagement, and burnout respectively, but we did find support for indirect effects via positive affect. In summary, these research results point to the beneficial effects of strengths interventions on the well-being of working people.

Chapter 7 is similar to Chapter 6 in that both chapters explore the effects of strengths interventions by means of longitudinal field experiments. In contrast to Chapter 6, however, Chapter 7 draws on a sample of graduate students instead of on an employee sample, and it introduces personal growth initiative (PGI) as an additional outcome variable that is not typically investigated in the context of positive psychology interventions. The students who participated in the two studies reported in Chapter 7 were in their final year before graduation and about to enter the labor market. They are a relevant study population, because they will be part of the future workforce whose members, more than ever before, will have to engage in continuous learning throughout their careers. Personal growth initiative has been included in this study because it captures proactive behavior with regard to learning and personal development, and because it is related to academic and career success. It can therefore be considered a construct that is worth enhancing among students. Previous research has shown that students' PGI can be enhanced by stimulating developmental activities. However, it has not yet been investigated whether developmental activities that focus on improving strengths are more or less effective than developmental activities that focus on correcting deficiencies. Within this study, we therefore conducted two longitudinal field experiments to compare the effects of a strengths intervention on students' PGI to the effects of an intervention that stimulates development in the area of individual

deficiencies (deficiency intervention). A total of 105 university students participated in Experiment 1, and were assigned to participate in either a one-day strengths- or a deficiency intervention. Results of Experiment 1 revealed that, while the deficiency intervention did not affect students' PGI, the strengths intervention increased PGI in the short- but not in the long-term. In Experiment 2, among 90 students, both interventions were slightly refined by putting a stronger emphasis on the ongoing development of strengths (strengths intervention) or correction of deficiencies (deficiency intervention). As an extension of Experiment 1, Experiment 2 also investigated the potential mediating role of psychological capital (PsyCap) in the relation between strengths interventions and PGI. Results suggested that participating in both interventions led to increases in PGI over a three-month period, but that these increases were stronger among students who received the strengths intervention. The positive relationship between the strengths intervention and PGI was moreover found to be mediated by hope as one particular component of PsyCap. Overall, results suggest that strengths interventions are not only a useful tool to enhance individual well-being, but can also contribute to individual development. The latter finding is of particular relevance because it indicates that strengths interventions can be used to prepare students for future careers that are ever more likely to place high demands on an individual's ability and motivation to learn and to adapt to new circumstances.

CONCLUSIONS AND IMPLICATIONS

Talent and talent management are two terms that are understood and interpreted in different ways by different people, scholars and (HR) practitioners alike. Given this variety in understandings, establishing one commonly accepted definition of talent and talent management respectively is very complicated. It might not even be desirable, because different definitions of talent lead to different definitions and practical implementations of talent management which, supposedly, lead to differential effects on employee and organizational outcomes. As HR managers tend to target different talent-management outcomes, it is only logical that they utilize different definitions of talent and, consequently, different talent-management approaches. If, for instance, HR managers aim at increasing the retention rate among top performers within the organization, they would probably choose an exclusive talent-management approach that comprises disproportionate investments into these employees (e.g., profitable bonus- and reward packages).

If, however, HR managers aim at fostering well-being among their employees, they can better make use of talent-management strategies that build on principles of positive psychology. That is, these HR managers should consider an inclusive or strengths-based approach to talent management which builds on the assumption that all employees have valuable talents and strengths. When employees get the opportunity to discover and use their strengths, they will experience positive emotions such as pride and joy, which, in the longer term contribute to fostering their general and work-related well-being. An increased focus on developing and

using strengths can also motivate employees to proactively invest in their own development, in particular, when talking about job starters and younger employees. This proactive attitude with regard to one's personal growth is triggered through an increased hope for the future: Using strengths makes individuals see several pathways towards their goals and provides them with energy in the process of goal-pursuit. Therefore, strengths-based talent management can be seen as an attractive and socially responsible approach to talent management that is particularly beneficial to employee well-being and development.

The chapters of this dissertation have three major *theoretical implications* for both talent management and positive psychology. First, this dissertation pleads for valuing the diversity in definitions of talent and talent management, and for regarding it as an inspiration for future research. Second, it shows that applications of positive psychology in the work context are beneficial and, most importantly, that talent management based on principles of positive psychology can be used to increase employee well-being and development. Third, it identifies positive affect and psychological capital (i.e. hope) as two mechanisms that explain how focusing on strengths contributes to other positive outcomes in the work context.

Along with theoretical implications, this dissertation also provides *practical implications***.** It highlights that there is neither one 'omnipotent' definition of talent, nor overall 'best practices' with regard to talent management. This implies that HR managers should concentrate on creating a strategic alignment between their definition of talent, their implemented talent-management approach, and the outcomes they aim to achieve (rather than copying what competitors do). If they aim to foster employee well-being, they should consider refraining from the commonly used exclusive approach to talent management and implementing an inclusive approach instead. In addition, HR managers can consider strengths interventions as cost- and time-efficient tools to boost general and work-related well-being among the workforce. Note, however, that these approaches will probably be most effective when embedded in a more holistic strengths-based approach to talent management.

This dissertation's most central *methodological implication* entails that field experiments are an underutilized, yet highly recommendable research design in the field of HRM. The biggest advantage of field experiments above other research designs is that they allow researchers to draw conclusions about cause and effect relationships. However, researchers utilizing field experiments should carefully consider confounding (environmental) factors and potential ceiling- or floor-effects in the measurement of research variables. Moreover, the use of three research conditions, namely an experimental condition, an active control condition, and a passive control condition is highly recommended.

Just as other research projects, the research presented in this dissertation is subject to *limitations*. First, it would have been desirable to expand the research presented in this dissertation by another study that explores the effects of an organization-wide inclusive

approach to talent management. Second, findings of this dissertation allow us to draw conclusions about populations that are similar to the participants sampled for the respective empirical studies. However, the generalizability of the presented findings to the wider population of all working people might be limited. Third, it would have been ideal to include objectively measured outcome variables (most notably: performance) in at least one of the studies next to the subjectively measured well-being variables. Fourth, this dissertation focuses on the role of the HR manager in shaping talent management only, but one could have also focused on line managers because the responsibility for talent management is more and more devolved to them. Finally, while this dissertation examined the effects of strengths intervention on individuals, it might also be valuable to examine the effects of these interventions on teams of individuals because strengths interventions might be more effective when colleagues support one another in using their strengths.

The findings presented in this dissertation suggest several *avenues for future research* regarding talent management and strengths interventions. On the one hand, the scientific field of talent management could greatly be advanced by (longitudinal and multi-level) studies that compare the effectiveness of different talent-management approaches. Thereby attention should be focused on individual-level outcomes such as employee engagement and organizational-level outcomes such as financial performance. In addition, research investigating the feasibility of different talent-management approaches within different contexts (organizational, cultural, institutional) could provide meaningful insights. On the other hand, research focusing on strengths interventions and other approaches based on positive psychology need further exploration. Specifically, the links between these interventions and objectively measured outcomes (e.g., performance and absenteeism) need to be explored. These links should be investigated at the individual- as well as at the team-level. Finally, it remains essential to explore which boundary conditions (e.g., personality, motivation) influence the effects of strengths interventions.

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"*Rest and be thankful*."

(William Wordsworth)

These four words by William Wordsworth seem to be a sound advice for individuals who have just finished their dissertation. Just take some time to rest and to be grateful[1].

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[1] Gratitude, by the way, is one of the most intriguing constructs that is discussed by positive psychologists: an emotion that is seemingly small, often discreet and unobtrusive, and yet ever so powerful. It has repeatedly been shown that spending a couple of minutes per day reflecting on the things one is grateful for can significantly increase one's happiness. Practicing gratitude might therefore be my second-favorite positive-psychology intervention (right after using strengths, of course). Therefore, dear readers, if you do not have the opportunity to use your strengths, count your blessings.

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(Ernest Hemingway – The Old Man and the Sea)

ABOUT THE AUTHOR

Maria Christina Meyers (born in Bielefeld, Germany, on May 3, 1986) obtained her bachelor's degree (B.Sc.) in Business Psychology at the Ruhr University Bochum, Germany, in 2009. During her bachelor studies she completed a 6-months internship at the Training & Development Department of QVC Germany. In 2010, she graduated from the Master's program Human Resource Studies (M.Sc.) at Tilburg University, the Netherlands (cum laude). After having worked as a research assistant for half a year, she was employed as a doctoral candidate at the department of Human Resource Studies at Tilburg University in 2011. Under supervision of Prof. Jaap Paauwe and Dr. Marianne van Woerkom, she worked on exploring a more positive, strengths-based approach to talent management. Her research interests include positive psychology in the contexts of organizations, employee strengths and talents, employee well-being, talent management, and field experiments. Part of her research is conducted in close collaboration with Dutch organizations. Christina has published her research in international journals such as *Human Resource Management Review*, *Journal of World Business*, *Human Resource Management*, *Journal of Counseling Psychology*, and *European Journal of Work and Organizational Psychology*. Furthermore, she has presented her work at national and international conferences such as the *Academy of Management Annual Meeting* (Boston, 2012; Philadelphia, 2014; Vancouver, 2015), the *World Congress on Positive Psychology* (Los Angeles, 2013), the *European Conference on Positive Psychology* (Moscow, 2012; Amsterdam, 2014), the *Congress of the European Association of Work and Organizational Psychology* (Maastricht, 2011; Münster, 2013; Oslo, 2015), and the *Dutch HRM Network Conference* (Leuven, 2013). Furthermore, Christina has been teaching courses at the bachelor's and master's level (e.g., Personal Skills, Management of Human Behavior in Organizations). She has supervised students while writing their bachelor or master theses. Next to research and teaching activities, Christina has chaired the PhD council of the Faculty of Social and Behavioral Sciences. She will continue her work as an Assistant Professor at Tilburg University.

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